

A D V I C E

T O

PEOPLE IN GENERAL,

W I T H

Respect to their HEALTH.

Translated from the FRENCH Edition of

Dr. TISSOT's *Avis au Peuple, &c.*

To which is added, by the Author,

TWO new CHAPTERS; one upon Inoculation, the other upon lingering Distempers: With the Author's Notes, and others adapted to this ENGLISH Translation.

A L S O

A TABLE of the most cheap, yet effectual Remedies, and the plainest Directions for preparing them readily.

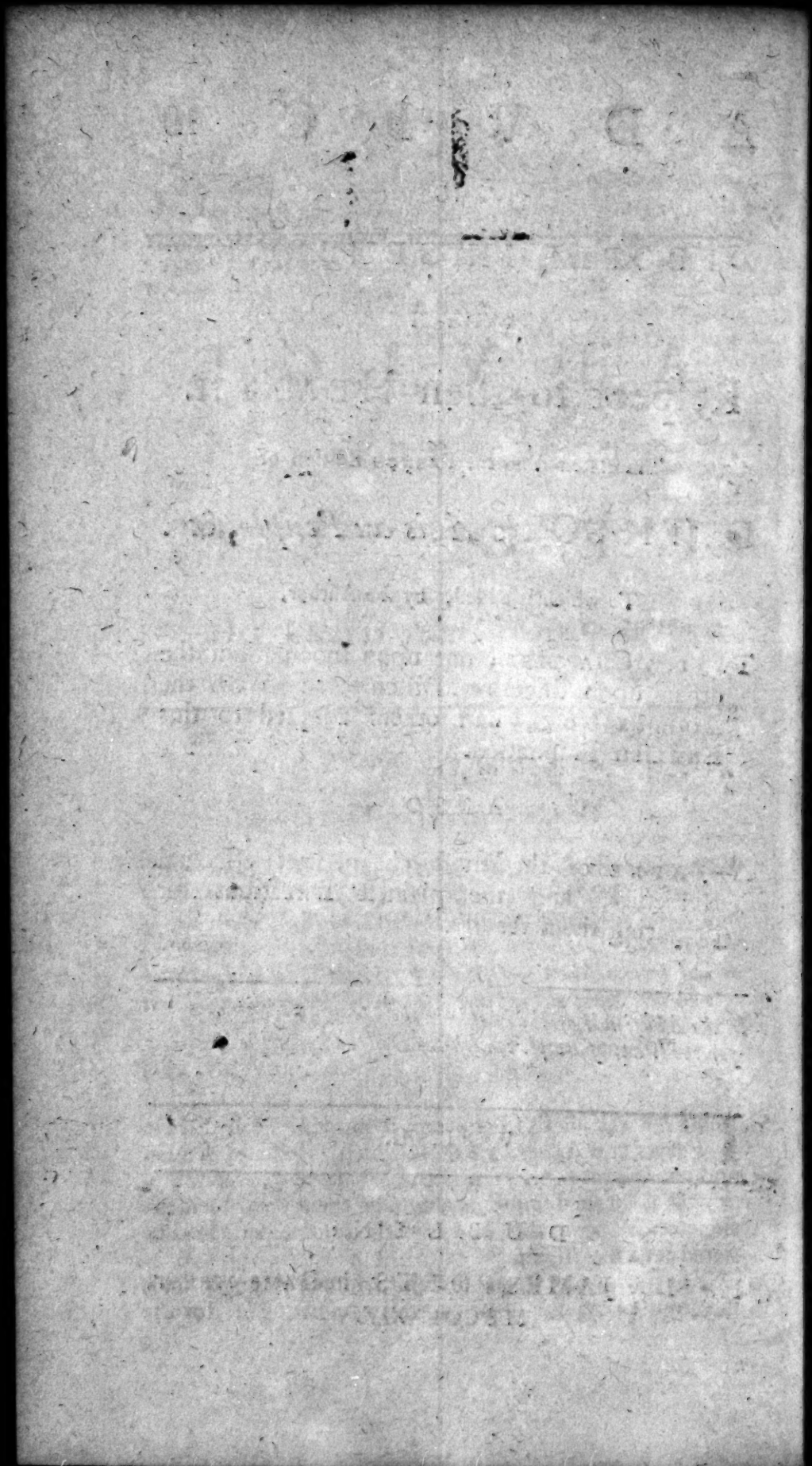
In the Multitude of the People is the Honour of a King; and for the Want of People cometh the Destruction of the Prince.

PROV. xiv. 28.

V O L. II.

D U B L I N :

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A D V I C E
T O T H E
P E O P L E,

With Respect to their HEALTH.

C H A P. XVIII.

Of INTERMITTING FEVERS.

Spring and Autumn Intermittents.—Method of Cure by the Bark.—Method of treating the Patient in the Fit.—Of other Febrifuges, besides the Bark.—The Treatment of long and obstinate Intermittents.—Of some very dangerous Intermittents.—Of some periodical Disorders, which may be termed Fevers disguised.—Of Preservatives from unwholesome Air.

S E C T. 250.

I N T E R M I T T I N G Fevers, commonly called here Fevers and Agues, are those which, after an infection and continuance for a few hours, abate very perceivably, as well as all the symptoms attending them, and then entirely cease; nevertheless, not without some periodical or stated return of them.

They were very frequent with us some years ago, and, not improperly, might be called Epidemic; But, for the
five

five or six last years, they have been less frequent throughout the greater part of Switzerland : Notwithstanding they still continue in great numbers, in all places where the inhabitants breathe the air that prevails in the marshy borders of the Rhone, and in some other situations exposed to much the same humid air and exhalations.

§ 251. There are various kinds of intermitting fevers, which take their different names from the interval or different space of time in which the fits return.

If the paroxysm or fit returns every day, it is either a true quotidian, or a double tertian fever : The first of these may be distinguished from the last by this incident, that in the quotidian, or one day fever, the fits are long, and correspond nearly regular to each other in degree and duration ; this however is less frequent in Switzerland. In the double tertian, the fits are shorter, and one is alternately light, and the other more severe.

In the simple tertian, or third day's fever, the fits return every other day ; so that three days include one paroxysm, and the return of another.

The fit in a quartan returns every fourth day, including the day of the first and that of the second attack ; so that the patient enjoys two clear days between the two sick ones.

The other kinds of intermittents are much rarer. I have seen, however, one true quintan, or fifth day ague, the patient having three clear days between two fits, and one regular Weekly Ague, as it may be called, the visitation of each return happening every Sunday.

§ 252. The first attack of an intermittent fever, often happens when the patient imagined himself in perfect health. Sometimes, however, it is preceded by a sensation of cold, and a sort of numbness, which continue some days before the manifest invasion of the fit. It begins with frequent yawnings, a lassitude, or sensation of weariness, with a general weakness, with coldness, shivering, and shaking. There is also a paleness of the extreme parts of the body, attended with loathings, and sometimes an actual vomiting ; the pulse is quick, weak, and small, and there is a considerable degree of thirst.

At the end of an hour or two, and but seldom so long as three or four hours, a heat succeeds, which increases insensibly, and becomes violent at its height. At this period the whole body grows red, the anxiety of the patient abates,

abates, the pulse is very strong and large, and his thirst proves excessive. He complains of a violent head-ach, and of a pain in all his limbs, but of a different sort of pain from that he was sensible of, while his coldness continued. Finally, having endured this hot state, four, five, or six hours, he falls into a general sweat for a few more; upon which all the symptoms already mentioned abate, and sometimes sleep supervenes.

At the conclusion of this nap, the patient often wakes without any sensible fever; complaining only of lassitude and weakness. Sometimes his pulse returns entirely to its natural state between the two fits, though it often continues a little quicker than in perfect health, and does not recover its first distinctness and slowness, till some days after the last fit.

One symptom, which most particularly characterises these several species of intermittent fevers, is the quality of the urines which the sick pass after the fit. They are of a reddish colour, and let fall a sediment, or settling, which exactly resembles brick-dust. They are sometimes frothy too, and a pellicle, or very thin filmy skin, appears on the top, and adheres to the sides of the glass that contains them.

§ 253. The duration of each fit is of no fixed time or extent, being various according to the particular sort of intermittents, and through many other circumstances. Sometimes they return precisely at the very same hour; at other times they come one, two, or three hours sooner, and in other instances, as much later than the former. It has been imagined that those fevers, whose paroxysms returned sooner than usual, were sooner finally terminated; but there seems to be no general rule in this case.

§ 254. Intermittent fevers are distinguished into those of spring and autumn. The former generally prevail from February to June; the latter are those which reign from July to January. Their essential nature and characters are the very same, as they are not different distempers; though the various circumstances attending them deserve our consideration. These circumstances depend on the season itself, and the constitution of the patients, during such seasons. The spring intermittents are sometimes blended with an inflammatory disposition, as that is the disposition of bodies in that season; but as the weather

ther then advances daily into an improving state, the spring fevers are commonly of a shorter duration. The autumnal fevers are frequently combined and aggravated with a principle of putrefaction; and as the air of that season rather degenerates, they are more tedious and obstinate.

§ 255. The autumnal fevers seldom begin quite so early as July, but much oftener in August; and the duration to which they are often extended, has increased the terror which the people entertain of fevers that begin in that month. But that prejudice which ascribes their danger to the influence of August, is a very absurd error; since it is better they should set in then than in the following months, because they are obstinate in proportion to the tardiness, the slowness, of their approach. They sometimes appear at first considerably in the form of putrid fevers, not assuming that of intermittents till some days after their appearance: But very happily there is little or no danger in mistaking them for putrid fevers, or in treating them like such. The brick-coloured sediment, and particularly the pellicle or film on the surface of the urine, are very common in autumnal intermittents, and are often wanting in the urine of putrid fevers. In these latter it is generally less high-coloured, and leaning rather to a yellow, a kind of cloudiness is suspended in the middle of it. These also deposite a white sediment, which affords no bad prognostic.

§ 256. Generally speaking, intermitting fevers are not mortal; often terminating in health of their own accord (without the use of any medicines) after some fits. In this last respect intermittents in the spring differ considerably from those in the fall, which continue a long time, and sometimes even until spring, if they are not removed by art, or if they have been improperly treated.

Quartan fevers are always more obstinate and inveterate than tertians; the former sometimes persevering in certain constitutions for whole years. When these sorts of fevers occur in boggy marshy countries, they are not only very chronical or tedious, but persons infested with them are liable to frequent relapses.

§ 257. A few fits of an intermittent are not very injurious, and it happens sometimes, that they are attended with a favourable alteration of the habit in point of health; by their exterminating the cause or principle of some languid

gild and tedious disorder; though it is erroneous to consider them as salutary. If they prove tedious and obstinate, and the fits are long and violent, they weaken the whole body, impairing all its functions, and particularly the digestions: They make the humours sharp and unbalmy, and introduce several other maladies, such as the jaundice, dropsy, asthma, and slow wasting fevers. Nay sometimes old persons, and those who are very weak, expire in the fit; though such an event never happens but in the cold fit.

§ 258. Very happily nature has afforded us a medicine, that infallibly cures these fevers: This is the *Kinkina*, or Jesuits bark; and as we are possessed of this certain remedy, the only remaining difficulty is to discover if there be not some other disease combined with these fevers, which disease might be aggravated by the bark. Should any such exist, it must be removed by medicines adapted to it, before the bark is given*.

§ 259.

* This admirable medicine was unknown in Europe, till about one hundred and twenty years past; we are obliged to the Spaniards for it, who found it in the province of Quito in Peru; the Countess of Chinchon being the first European who used it in America, whence it was brought to Spain, under the name of the Countess's powder. The Jesuits having soon dispensed and distributed it abroad, it became still more public by the name of the Jesuits Powder; and since it has been known by that of *Kinkina*, or the Peruvian Bark. It met with great opposition at first; some deeming it a poison, while others considered it as a divine remedy: So that the prejudices of many being heightened by their animosity, it was nearly a full century before its true virtue and its use were agreed to: And about twenty years since the most unfavourable prejudices against it pretty generally subsided. The insufficiency of other medicines in several cases, its great efficaciousness, and the many and surprising cures which it did, and daily does effect; the number of distempers, the different kinds of fevers, in which it proves the sovereign remedy; its effects in the most difficult chirurgical cases; the comfort, the strength and spirits it give those who need and take it, have at length opened every person's eyes, so that it has almost unanimously obtained the first reputation among the most efficacious medicines. The world is no longer amused with apprehensions of its injuring the stomach; of its fixing or *shutting up* the fever (as the phrase has been) without

§ 259. In the vernal, or spring fevers, if the fits are not very severe; if the patient is evidently well in their intervals; if his appetite, his strength, and his sleep continue as in health, no medicine should be given, nor any other method be taken, but that of putting the person, under such a gentle intermittent, upon the regimen directed for a person in a state of recovery. This is such a regimen as pretty generally agrees with all the subjects of these fevers: For if they should be reduced to the regimen proper in acute diseases, they would be weakened to no purpose, and perhaps be the worse for it. But at the same time, if we were not to retrench from the quantity, nor somewhat to vary the quality of their usual food in a state of health; as there is not the least digestion made in the stomach, during the whole term of the fit; and as the stomach is always weakened a little by the disease, crude and indigested humours would be produced, which might afford a fuel to the disease. Not the least solid food should be allowed, for at least two hours before the usual approach of the fit.

§ 260. If the fever extends beyond the sixth, or the seventh fit, and the patient seems to have no occasion for a purge; which may be learned by attending to the chapter which treats of remedies to be taken by way of precaution*; he may take the bark, that is, the powder No.

14.

without curing it; that it shuts up the wolf in the sheep-fold; that it throws those who take it into the scurvy, the asthma, the dropsy, the jaundice. On the contrary, they are persuaded it prevents these very diseases; and, that if it is ever hurtful, it is only when it is either adulterated, as most great remedies have been; or has been wrongly prescribed, or improperly taken: Or lastly when it meets with some latent, some unknown particularities in a constitution, which physicians term an *Indiosynera*, and which prevent or pervert its very general effects.

TISSOT,

* It happens very seldom that intermitting fevers require
† no purge towards their cure, especially in places which are
disposed

† Yet I have known many in whom no purge was necessary, and have seen some rendered more obstinate and chronic by erroneous purging. But a vomit is very generally necessary before the bark is given.

14. If it is a quotidian, a daily fever, or a double tertian, six doses, containing three quarters of an ounce, should be taken between the two fits; and as these intermissions commonly consist of but ten or twelve, or at the most of fourteen or fifteen hours, there should be an interval of only one hour and a half between each dose. During this interval the sick may take two of his usual refreshments or suppers.

When the fever is a tertian, an ounce should be given between the two fits, which makes eight doses, one of which is to be taken every three hours.

In a quartan I direct one ounce and an half to be taken in the same manner. It is mere trifling to attempt preventing the returns with smaller doses. The frequent failures of the bark are owing to over small doses. On such occasions the medicine is cried down, and censured as useless, when the disappointment is solely the fault of those who do not employ it properly. The last dose is to be given two hours before the usual return of the fit.

The doses just mentioned, frequently prevent the return of the fit; but whether it returns or not, after the time of its usual duration is past, repeat the same quantity, in the same number of doses and intervals, which certainly keeps off another. For six days following, half the same quantity must be continued, in the intervals that would have occurred between the fits, if they had returned: And during all this time the patient should inure himself to as much exercise as he can well bear.

§ 261. Should the fits be very strong, the pain of the head violent, the visage red, the pulse full and hard; if there is any cough; if, even after the fit is over, the pulse still is perceivably hard; if the urine is inflamed, hot and high coloured, and the tongue very dry, the patient must be bled, and drink plentifully of barley-water No.

3. These two remedies generally bring the patient into the state described § 259: In which state he may take on

disposed to generate putridity. There is always some material cause essential to these fevers, of which nature disembarasses herself more easily by stools, than by any other discharge; and as there is not the least danger to be apprehended from a gentle purge, such as those of No 11, or 23, we think it would be prudent always to premise a dose or two of either to the bark. *E. L.*

a day,

a day, when the fever is entirely off, three or four doses of the powder No. 24, and then leave the fever to pursue its course for the space of a few fits. But should it not then terminate of itself, the bark must be recurred to.

If the patient, even in the interval of the returns, has a foetid furred mouth, a loathing, pains in the loins, or in the knees, much anxiety, and bad nights, he should be purged with the powder No. 21, or the potion No. 23, before he takes the bark.

§ 262. If fevers in autumn appear to be of the continual kind, and very like putrid fevers, the patients should drink abundantly of barley-water, and if, at the expiration of two or three days, there still appears to be a load or oppression at the stomach, the powder No. 34, or that of 35, is to be given (but see § 241): And if, after the operation of this, the signs of putridity continue, the body is to be opened with repeated doses of the powder No. 24; or, where the patients are very robust, with No. 21; and when the fever becomes quite regular, with distinct *remissions* at least, the bark is to be given as directed § 260.

But as the autumnal fevers are more obstinate, after having discontinued the bark for eight days, and notwithstanding there has been no return of the fever, it is proper to resume the bark, and to give three doses of it daily for the succeeding eight days, more especially if it was a quartan, in which species I have ordered it to be repeated every other eight days, for six times.

Many people may think it difficult to comply with this method of cure, which is unavoidably expensive through the price of the bark. I thought however this ought not to prevent me from averring it to be the only certain one; since nothing can be an equivalent *succedaneum* or substitute to this remedy, which is the only sure and safe one in all these cases. The world had long been prepossessed with prejudices to the contrary; it was supposed to be hurtful to the stomach, to prevent which it has been usual to make the sick eat something an hour after it. Nevertheless, very far from injuring the stomach, it is the best medicine in the universe to strengthen it; and it is a pernicious custom, when a patient is obliged to take it often, to eat an hour after it. It had also been imagined to cause obstructions, and that it subjected patients to a dropsy: But at present we are convinced, it is the obstinate and inveterate

inveterate duration of the intermittent, that causes obstructions, and paves the way to a dropsy. The bark, in consequence of its speedily curing the fever, does not only prevent the former disease; but when it continues, through an injudicious omission of the bark, a proper use of it is serviceable in the dropsy. In a word, if there is any other malady combined with the fever, sometimes that indeed prevents the success of the bark, yet without rendering it hurtful. But, whenever the intermitting fever is simple and uncombined, it ever has, and ever will render the patient all possible service. In another place I shall mention such means and methods as may in some degree, though but imperfectly, be substituted instead of it.

After the patient has begun with the bark, he must take no purging medicine, as that evacuation would, with the greatest probability, occasion a return of the fever.

§ 263. Bleeding is never, or extremely seldom indeed necessary in a quartan ague, which occurs in the fall oftener than in the spring; and with the symptoms of putridity rather than of inflammation.

§ 264. The patient ought, two hours before the invasion of the fit, to drink a small glass of warm elder-flower tea, sweetened with honey, every quarter of an hour, and to walk about moderately; this disposes him to a very gentle sweat, and thence renders the ensuing coldness and the whole fit milder. He is to continue the same drink throughout the duration of the cold fit; and when the hot one approaches, he may either continue the same, or substitute that of No. 2, which is more cooling. It is not necessary however, in this state, to drink it warm, it is sufficient that it be not over cold. When the sweat, at the termination of the hot fit, is concluded, the patient should be well wiped and dried, and may get up. If the fit was very long, he may be allowed a little gruel, or some other such nourishment during the sweat.

§ 265. Sometimes the first, and a few successive doses of the bark, purge the patient. This is no otherwise an ill consequence, than by its retarding the cure; since, when it purges, it does not commonly prevent the return of the fever; so that these doses may be considered as to no purpose, and others should be repeated, which, ceasing to purge, do prevent it. Should the looseness notwith-

standing continue, the bark must be discontinued for one entire day, in order to give the patient half a quarter of an ounce of rhubarb: After which the bark is to be resumed again, and if the looseness still perseveres, fifteen grains of Venice-treacle should be added to each dose, but not otherwise. All other medicines which are super-added, very generally serve only to increase the bulk of the dose, while they lessen its virtue.

§ 266. Before our thorough experience of the bark, other bitter medicines were used for the same purpose: These indeed were not destitute of virtue in such cases, though they were considerably less available than the bark. Under No. 43, some valuable prescriptions of that kind may be seen, whose efficacy I have often experienced: Though at other times I have been obliged to leave them off, and recur to the bark more successfully. Filings of iron, which enters into the third prescription, are an excellent febrifuge in particular cases and circumstances. In the middle of the winter 1753, I cured a patient of a quartan ague with it, who would not be prevailed on to take the bark. It must be observed he was perfectly regular in observing the regimen directed for him; and that, during the most rigid severity of the winter, he got every day on horseback, and took such a degree of other exercise in the open air, as disposed him to perspire abundantly.

§ 267. Another very practicable easy method, of which I have often availed my patients, under tertian fevers (but which succeeded with me only twice in quartans,) was to procure the sufferer a very plentiful sweat, at the very time when the fit was to return, in its usual course. To effect this he is to drink, three or four hours before it is expected, an infusion of elder-flowers sweetened with honey, which I have already recommended § 264; and, one hour before the usual invasion of the shivering, he is to go into bed, and take, as hot as he can drink it, the prescription No. 44.

I have also cured some tertians and even quartans in 1751 and 1752, by giving them, every four hours between the fits, the powder No. 45. But I must acknowledge that, besides it having often failed me, and its never succeeding so speedily as the bark, I have found it weaken some patients; it disorders, or disagrees with their stomach: And in two cases, where it had removed the
fever,

fever, I was obliged to call in the bark for a thorough establishment of the patient's health. Nevertheless, as these medicines are very cheap and attainable, and often do succeed, I thought I could not properly omit them.

§ 268. A multitude of other remedies are cried up for the cure of fevers, though none of them are equally efficacious with those I have directed: And, as many of them are even dangerous, it is prudent to abstain from them. Some years since certain powders were sold here, under the name of the *Berlin Powders*; these are nothing but the bark masked or disguised, (which has sometimes been publicly discovered) and have always been sold very dear: Though the bark well chosen, and freshly powdered when wanted, is greatly preferable.

§ 269. I have often known peasants, who had laboured for several months under intermitting fevers; having made use of many bad medicines and mixtures for it, and observed no manner of regimen. Such I have happily treated by giving them the remedies No. 34, or 35; and afterwards, for some days, that of No. 38; at the end of which time, I have ordered them the bark (see § 260), or other febrifuges, as at § 266, 267; and then finally ordered them, for some days to take morsels of the poor man's treacle, (see § 247, art. 13,) to strengthen and confirm their digestions, which I have found very weak and irregular.

§ 270. Some intermittents are distinguished as pernicious or malignant, from every fit's being attended with the most violent symptoms. The pulse is small and irregular, the patient exceedingly dejected, and frequently swooning; afflicted with inexpressible anguish, convulsions, a deep drowsiness, and continual efforts to go to stool, or make urine, but ineffectually. This disease is highly pressing and dangerous; the patient may die in the third fit, and rarely survives the sixth, if he is not very judiciously treated. Not a moment should be lost, and there is no other step to be taken, but that of giving the bark continually, as directed § 260, to prevent the succeeding fits. These worst kinds of intermittents are often combined with a great load of putrid humours in the first passages: And as often as an aggravating combination is very evident, we should immediately after the end of one fit, give a dose of Ipecacuana No. 35, and, when its operation is finished, give the bark. But I chuse

to enter into very few details on this species of intermittents, both as they occur but seldom, and the treatment of them is too difficult and important to be submitted to the conduct of any but a physician. My intention has only been to represent them sufficiently, that they may be so distinguished when they do occur, as to apprise the people of their great danger.

§ 271. The same causes which produce these intermitting fevers, frequently also occasion disorders, which return periodically at the same hour without shivering, without heat, and often without any quickness of the pulse. Such disorders generally preserve the intermissions of quotidian or tertian fevers, but much seldomer those of quartans. I have seen violent vomitings, and reachings to vomit, with inexpressible anxiety, the severest oppressions, the most racking colicks, dreadful palpitations, and excessive tooth-achs, pains in the head, and very often an unaccountable pain over one eye, the eye-lid, eyebrow, and temple, on the same side of the face, with a redness of that eye, and a continual, involuntary trickling of tears. I have also seen such a prodigious swelling of the affected part, that the eye projected, or stood out above an inch from the head, covered by the eye-lid, which was also extremely inflated or puffed up. All these maladies begin precisely at a certain hour, last about the usual time of a fit, and, terminating without any sensible evacuation, return exactly at the same hour, the next day, or the next but one.

There is but one known medicine that can effectually oppose this sort, which is the bark, given as directed § 260. Nothing affords relief in the fit, and no other medicine ever suspends or puts it off. But I have cured some of these disorders with the bark, and especially those affecting the eyes, which happen oftener than the other symptoms, after their duration for many weeks, and after the ineffectual use of bleeding, purging, baths, waters, blisters, and a great number of other medicines. If a sufficient dose of it be given, the next fit is very mild, the second is prevented; and I never saw a relapse in these cases, which sometimes happens after the fits of common intermittents seemed cured.

§ 272. In situations where the constitution of the air renders these fevers very common, the inhabitants should frequently burn in their rooms, at least in their lodging rooms,

rooms, some aromatic wood, or herbs. They should daily chew some juniper-berries, and drink a fermented infusion of them. These two remedies are very effectual to fortify the weakest stomachs, to prevent obstructions, and to promote perspiration. And as these are the causes which prolong these fevers the most obstinately, nothing is a more certain preservation from them than these cheap and obvious assistances *.

CHAP.

I have seen several cases in very marshy maritime countries, with little good drinking water, and far south of Switzerland, where intermitting fevers, with agues at different intervals are annually endemic, very popular, and often so obstinate as to return repeatedly, whenever the weekly precautionary doses of the bark have been omitted (through the patient's nauseating the frequent swallowing of it) so that the disease has sometimes been extended beyond the term of a full year, and even far into a second, including the temporary removals of it by the bark. Nevertheless, in some such obstinate intermittents, and particularly quartans, wherein the bark alone has had but a short and imperfect effect, I have known the following composition, after a good vomit, attended with speedy and final success, *viz.* Take of fresh sassafras-bark, of Virginia snake-root, of rock-alum, of nutmeg, of diaphoretic antimony, and of salt of worm-wood, of each one drachm. To these, well rubbed together into fine powder, add the weight of the whole, of the best and freshest bark; then drop in three or four drops of the chemical oil of mint, and with syrup of cloves make it into the consistence of an electuary or bolus, for 12 doses for a grown person, to be taken at the distance of three or four hours from each other, while the patient is awake, according to the longer or shorter intermission of the fever.

I have also known, particularly in obstinate autumnal agues here, an infusion of two ounces of the best bark in fine powder, or two ounces and a half in gross powder in a quart of the best brandy, for three or four days (a small wine-glass to be taken by grown persons at the distance of from four to six hours) effectually and speedily terminate such inveterate agues, as had given but little way to the bark in substance. This was certainly most suitable for those who were not of a light delicate habit and temperament, and who had not been remarkable for their abstinence from strong liquors. The inebriating force of the brandy being remarkably lessened by the addition and long infusion of the bark. These facts

C H A P. XIX.

*Of the Erisipelas, and the Bites of Animals.**Of the frequent or habitual Erisipelas. — Of the Stings or Bites of Animals.*

S E C T. 273.

THE Erisipelas, commonly called with us *violet*, and in Britain, *St. Anthony's fire*, is nothing sometimes but a very slight indisposition which appears on the skin, without any other ailment of the patient. It generally affects the face or the legs. The skin distends, becomes rough and red, but the redness disappears, when the part affected is pressed with the finger, and returns when the finger is removed; the patient feels a burning heat, which is painful and sometimes hinders him from sleeping. The distemper increases for two or three days, remains in its height one day or two, and abates; then the affected skin falls off in great scales, and all is over.

§ 274. At other times, this malady comes to a greater height: It begins by a very strong shivering, followed by a burning heat, a violent head-ach, sickness at heart, or reachings to vomit, which never cease till the erisipelas breaks out, and this only happens sometimes the second, or even the third day: Then the fever abates, and the sickness at heart ceases; but often there remains a little of the fever and loathing, during all the time that the erisipelas increases. When it affects the face, the head-ach continues till it is on the decline, the eye-lid swells, the eye closes, and the patient has not the least moment of ease. Often the eruption goes from one cheek to the other, and spreads successively on the forehead, the neck, and the nape of the neck; then the disease lasts longer than usual: Nay often, when the disease is severe, the fever subsists, the brain is oppressed, the patient raves, his case is very dangerous; and some-

which I saw, are the less to be wondered at; as in such inveterate, but perfectly clear and distinct intermittents, both the state of the fluids and solids seem very opposite to their state in an acutely inflammatory disease.

times

times, if he does not get proper assistance, he dies; above all, if an advanced age is joined to the distemper. An *erisipelas* of a violent nature on the neck occasions a quinsy, which may prove very fatal; when it seizes the leg, the whole leg swells, and the irritation ascends even to the thigh.

As soon as the *erisipelas* is any ways strong, it is covered with small pustules full of clear water, such as that which comes from a tumour occasioned by a burn, and these pustules afterwards dry and scale off. I have sometimes seen, especially when the *erisipelas* attacks the face, that the humour, which came from these pustules, was very viscid, and formed thick crusty scabs like those of sucking children, and they continued several days before they went off.

When the *erisipelas* is violent, it continues sometimes eight, ten, twelve days in the same state, and at last it goes away by a plentiful sweat: This is sometimes foreseen by an uneasiness attended by shivering, and a little anguish that lasts some hours. During the continuation of the malady, all the skin is very dry, and even the inside of the mouth.

§ 275. An *erisipelas* rarely comes to suppuration, and when it does, the suppuration is always unkindly, and much disposed to degenerate into an ulcer. Sometimes a malignant kind of *erisipelas* is epidemical, seizing a great number of persons, and frequently terminating in gangrenes.

§ 276. This distemper often shifts its situation; it sometimes retires suddenly; but the patient is uneasy and disordered, he has a propensity to vomit, with a sensible anxiety and heat; the *erisipelas* appears again in a different part, and he feels himself quite relieved from the preceding symptoms. But if instead of re-appearing on some other part of the surface, the humour is thrown up on the brain or the breast, he dies within a few hours; and these fatal changes and translations sometimes occur, without the least reason or colour for ascribing them either to any error of the patient or of his physician.

If the humour has been transferred to the brain, the patient immediately becomes delirious, with a very flushed visage, and over quick sparkling eyes: Very soon after he proves downright frantic, and goes off in a lethargy,

If the lungs are attacked, the oppression, anxiety, and heat are inexpressible.

§ 277. There are some constitutions subject to a very frequent, and, as it were, to an habitual *erisipelas*. If it often affects the face, it is generally repeated on the same side of it; and that eye is, at length, considerably weakened by it.

§ 278. This distemper results from two causes; the one, an acrid sharp humour, which is commonly bilious, diffused through the mass of blood; the other consists in that humour's not being sufficiently discharged by perspiration.

§ 279. When the disease is of a gentle nature, such as it is described, § 273, it will be sufficient to keep up a very free perspiration; but without heating the patient; and the best method to answer this purpose is putting him upon the regimen so often already referred to, with a plentiful use of nitre in elder tea. Flesh, eggs, and wine are prohibited of course, allowing the patient a little pulse and ripe fruits. He should drink elder flower tea abundantly, and take half a drachm of nitre every three hours, or, which amounts to the same thing, let three drachms of nitre be dissolved in as much infusion of elder-flowers as he can drink in twenty-four hours. Nitre may be given too in a bolus with a conserve of elder-berries. These medicines keep the body open, and increase urine and perspiration.

§ 280. When the distemper prevails in a greater degree, if the fever is very high, and the pulse, at the same time, strong or hard, it may be necessary to bleed once: But this should never be permitted in a large quantity at a time in this disease; it being more adviseable, if a sufficient quantity has not been taken at once, to bleed a second time, and even a third, if the fever should prove very high, as it often does, and that sometimes in so violent a degree, as to render it extremely dangerous: And in some such cases nature has sometimes saved the patients by effecting a large hæmorrhage, or bleeding, to the quantity of four or five pounds. This method a very intelligent and prudent physician may presume to imitate; but I dare not advise the same conduct to that class of physicians, for which only I write: It being safer for them to use repeated bleedings in such cases, than one in an excessive quantity. These erisipelatous fevers
are

are often excited by a person's being too long overheated.

After bleeding the patient is to be restrained to his regimen : glysters are to be given until there is a sensible abatement of the fever ; and he should drink the barley water freely, No. 3.

When the fever is somewhat diminished, either the purge No. 23, should be given, or a few doses every morning of cream of tartar No. 2. Purging is absolutely necessary to carry off the stagnant bile, which is generally the first cause of the violent degrees of this distemper. It may sometimes be really necessary too, if the disease is very tedious, if the loathing and sickness at the stomach is obstinate, the mouth ill-savoured, and the tongue foul, (provided there be only a slight fever, and no fear of an inflammation) to give the medicines No. 34. or 35 ; which, in consequence of the agitation, the shaking they occasion, remove these impediments still better than purges.

It commonly happens that this disease is more favourable after these evacuations ; nevertheless it is sometimes necessary to repeat them the next day, or the next but one ; especially if the malady affects the head. Purging is the true evacuation for curing it, whenever it attacks this part. By carrying off the cause of the disease, they diminish it, and prevent its worst events.

Whenever, even after these evacuations, the fever still continues to be very severe, the patient should take every two hours, or occasionally oftener, two spoonfuls of the prescription No. 10, added to a glass of ptisan.

It will be very useful, when this disease is seated in the head or face, to bathe the legs frequently in warm water ; and where it is violent there, also to apply sinapisms to the soles of the feet. I have seen this application, in about four hours, attract, or draw down an *erisipelas* to the legs which had spread over the nose and both the eyes. When the distemper once begins to go off by sweating, this should be promoted by elder-flower tea and nitre (see § 279) ; and the sweating may be encouraged to advantage for some hours.

§ 281. The best applications that can be made to the affected part are ; 1. The herb Robert, a kind of *Geranium*, or crane's-bill ; or chervil, or parsley, or elder-flowers : And, if the complaint be of a very mild disposition,

sition, it may be sufficient to apply a very a soft smooth linen over it, which some people dust over with a little dry meal *.

2. If there is a very considerable inflammation, and the patient is so circumstanced as to be very tractable and regularly attended, flannels wrung out of a strong decoction of elder-flowers, and applied warm, afford him the speediest ease and relief. By this simple application, I have appeased the most violent pains of a St. Anthony's Fire, which is the most cruel species of an erisipelas, and has some peculiar marks or symptoms extraordinary.

3. The plaster of smalt, and smalt itself, No. 46, are also very successfully employed in this disease.

This powder, the farinaceous, or meally ones, or others cried up for it, agree best when a thin watery humour distils or weeps from the little vesications attending it, which it is convenient to absorb by such applications; without which precaution it might gall, or even ulcerate the part.

All other plasters, which are partly compounded of greasy, or of resinous substances, are very dangerous; they often repel, or strike in the *erisipelas*, occasioning it to ulcerate, or even to gangrene. If people who are naturally subject to this disease should apply any such plaster to their skin, even in its soundest state, an *erisipelas* is the speedy consequence.

§ 282. Whenever the humour occasioning the distemper is repelled, and thrown upon the brain, the throat, the lungs, or any internal part, the patient should be bled, blisters must be applied to the legs, and elder tea, with nitre dissolved in it, should be plentifully drank.

§ 283. People who are liable to frequent returns of an *erisipelas*, should very carefully avoid using milk, cream, and all fat and viscid, or clammy food, pies, brown meat, spices, thick and heady liquors, a sedentary life, the more active passions, especially rage, and if possible, all chagrin too. Their food should chiefly consist of herbage, fruits, of substances inclining to acidity, and which tend to keep the body open: They should drink water, and some of the light white wines; by no means omitting the frequent use of cream of tartar. A careful conformity to these re-

* This application is of all others the most efficacious, and is frequently used even by the common people of this country.

gulations is of real importance; as, besides the danger of the frequent visitations of this disease, they denote some slight indispositions of the liver and the gall-bladder; which, if too little attended to, might in time prove very troublesome and pernicious.

Such mineral waters as are gently opening, are very proper for these constitutions, as well as the juice of succory, and clarified whey, of which they should take about three pints every morning, during the five or six summer months. This becomes still more efficacious, if a little cream of tartar and honey be added to it.

Of Stings, or small Wounds, by Animals.

§ 284. The stings or little bites of animals, frequently producing a kind of *erisipelas*, I shall add a very few words here concerning them.

Of the serpents in this country, none but the vipers are poisonous; and none of these are found except at *Baume* where there is a *viperary*, if we may use that word. We have no scorpions, which are somewhat poisonous; our toads are not in the least so: Whence the only stings we are exposed to, are those of bees, wasps, hornets, mosquitos or gnats, and dragon flies*: All of which are sometimes attended with severe pain, a swelling, and a very considerable *erisipelatous* redness; which, if it happens in the face, sometimes entirely closes the eyes up; occasioning also a fever, pains of the head, restlessness, and sickness at heart; and when the pains are in a violent degree, faintings and convulsions, though always without any mortal consequence. These symptoms go off naturally within a few days, without any assistance; Nevertheless they may either be prevented, diminished in degree, or shortened in duration.

1. By extracting the sting of the animal, if it is left behind.

2. By a continual application of one of the remedies directed § 281, article 1 and 2, particularly the infusion of elder-flowers, to which a little Venice-treacle is added,

* These by some are called *pismires*, by others *mosquito hawks*.

or by covering the part affected with a poultice, made of crum of bread, milk, honey, and a little Venice-treacle †.

3. By bathing the legs of the person stung repeatedly in warm water.

4. By retrenching a little of their customary food, especially at night; and by making them drink an infusion of elder-flowers, with the addition of a little nitre. Oil, if applied very quickly after the sting, sometimes prevents the appearance of any swelling, and from thence the pains that attend it.

CHAP. XX.

Of Inflammations of the Breast, and of false and bilious Pleurifies.

Of the false Inflammation of the Breast.—The false and bilious Pleurisy.

SECT. 285.

THE inflammation of the heart, and that pleurisy which we call Bilious, are the very same disorder: It is properly a putrid fever accompanied with an oppression or stuffing of the lungs, which is either without pain, and then is called a Putrid or Bilious peripneumony, or with a pain in the side (a *stitch*) and is called Pleurisy.

§ 286. The signs which distinguish these disorders from the inflammatory disorders of the same name, which I have described in Chap. IV. and V. are a pulse less hard, less strong, more quick, without any of the symptoms that render it such, even in the inflammatory diseases (see § 47, and 90) there are a foulness and bitterness in the mouth, the heat is sharp and dry, the patient feels a heaviness, an uneasiness about his stomach and loathings, his complexion is less red than in the peripneumonies and inflammatory pleurifies, it is a little yellow, he has a downcast look, his urine is like that in putrid fevers, and not like that in the inflammatory ones; he has very often a small bilious looseness and very foetid, his skin is gene-

† Pounded parsley is one of the most availing applications in such accidents. F. L.

rally very dry, the spittle less thick, less red, but more yellow than in the inflammatory kind.

§ 287. These diseases are treated in the same way as the putrid fevers (§ 241.) If there is any inflammation one bleeding removes it, afterwards barley-water is given No. 3, and injections; and when the inflammation is entirely gone, the vomiting and purging potion is used No. 34. But the greatest care must be taken not to give it till the whole inflammatory disposition is removed: For to use it before that time is infallible death for the patient, and it is grievous to agitate by a vomit, lungs which are inflamed and loaded with blood, for their vessels burst only by the effect of expectoration; afterwards one may employ the purging again at the end of some days with the medicine No. 23. The powder No. 25, succeeds also very well as a vomit.

If the fever becomes very violent, plenty of the potion No. 10, must be given to the patient.

These diseases are often epidemical, as common putrid fevers: They raged much here in 1753, and I treated them with great success, according to the method I have been mentioning.

Applying blisters to the legs is very useful, when the oppression is not diminished after the general evacuations.

§ 288. The false inflammation of the breast is an overfullness or obstruction in the lungs, accompanied with a fever; and it is caused by extremely thick and tenacious humours; and not by a really inflammatory blood, or by any putrid or bilious humour.

§ 289. This distemper happens more frequently in the spring, than in any other season. Old men, puny, ill constituted children, languid women, feeble young men, and particularly such as have worn their constitutions by drinking, are the subjects most frequently attacked by it; especially if they have used but little exercise throughout the winter: If they have fed on viscid, meally and fat aliments, as pastry, chestnuts, thick milk or pap, and cheese. All their humours have contracted a thick glutinous quality; they are circulated with difficulty, and when heat or exercise in the spring increases their motion at once, the humours, already stuffing up the lungs, still more augment that plenitude, whence these vital organs are fatally extended, and the patient dies.

§ 290. This distemper is known to exist,

1. By the previous existence of the causes already mentioned.

2. By the symptoms which precede and usher it in. For example, the patient many days beforehand has a slight cough; a small oppression when he moves about; a little restlessness, and is sometimes a little choleric or fretful. His countenance is higher coloured than in health; he has a propensity to sleep, but attended with confusion and without refreshment, and has sometimes an extraordinary appetite.

3. When this state has continued for some days, there comes on a cold shivering, though more considerable for its duration than its violence; it is succeeded by a moderate degree of heat, but that attended with much inquietude and oppression. The sick person cannot confine himself to the bed; but walks to and fro in his chamber, and is generally dejected. The pulse is weak and pretty quick; the urine is sometimes but little changed from that in health: at other times it is discharged but in a small quantity, and is higher coloured: He coughs but moderately, and does not expectorate, or cough up, but with difficulty. The visage becomes very red, and even almost livid; he can neither keep awake, nor sleep well; he raves for some moments, and then his head grows clear again. Sometimes it happens, especially to persons of advanced age, that this state suddenly terminates in a mortal swoon or fainting: At other times, and in other cases, the oppression and anguish increase, the patient cannot breathe but when sitting up, and that with great difficulty and agony, the brain is utterly disturbed and embarrassed; this state lasts for some hours, and then terminates of a sudden.

§ 291. This is a very dangerous distemper; because, in the first place, it chiefly attacks those persons whose temperament and constitution are deprived of the ordinary resources for health and recovery: In the second place, because it is of a precipitate nature, the patient sometimes dying on the third day, and but seldom surviving the seventh; while the cause of it requires a more considerable term for its removal or mitigation. Besides which, if some indications present for the employment of a remedy, there are frequently others which forbid it; and all that seems to be done, is as follows:

1. If the patient has a pretty good share of health; if
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he is not of too advanced an age; if the pulse has a perceivable hardness, and yet at the same time some strength; if the weather is dry, and the wind blows from the north, he should be bled once to a moderate quantity. But if the greater part of these circumstances are wanting, bleeding would be very prejudicial. Were we obliged to establish some general and positive rule in this case, it were better to exclude bleeding, than to admit it.

2. The stomach and the bowels should be unloaded from their viscid glutinous contents; and the medicines which succeed the best in this respect are No. 35, when the symptoms shew there is a great necessity for vomiting, and there is no inflammation; or the prescription No. 25, which after vomiting, purges by stool, promotes urine, breaks down and divides the viscid humours that occasion the disease, and increase perspiration. When we are afraid of hazarding the agitation of a vomit and its consequences, the potion No. 11 may be given; but we must be very cautious, in regard to old men, even with this; as such may expire during the operation of it.

3. They should, from the beginning of the disease, drink plentifully of the ptisan No. 26, which is the best drink in this disease; or that of No. 12, adding half a drachm of nitre to every pint of it.

4. A cup of the mixture No. 8, must be taken every two hours.

5. Blisters are to be applied to the insides of the legs.

When the case is very doubtful and perplexing, it were best to confine ourselves to the three last-mentioned remedies, which have often been successful in severe degrees of this disease; and which can occasion no ill consequence.

§ 292. When this malady invades old people, though they partly recover, they never recover perfectly, entirely from it: And if due precaution is not taken, they are very liable to fall into a dropsy of the breast after it.

§ 293. The spurious or false pleurisy is a distemper that does not affect the lungs, but only the teguments, the skin, and the muscles which cover the ribs. It is the effect of a rheumatic humour thrown upon these parts, in which, as it produces very sharp pains resembling that which is called a *fitch*, it has from this circumstance been termed a Pleurisy.

It is generally supposed by the mere multitude, and even by some of a different rank, that a false pleurisy is more

more dangerous than a genuine, a true one; but this is a mistake. It is often ushered in by a shivering, and almost ever attended with a little fever, a small cough, and a slight difficulty of breathing; which, as well as the cough, is occasioned from the circumstance of a patient's (who feels pain in respiration, or breathing) checking breathing as much as he can; this accumulates a little too much blood in the lungs; but yet he has no anguish, nor the other symptoms of acute true pleurisy. In some patients this pain is extended almost over the whole breast, and to the nape of the neck. The sick person cannot repose himself on the side affected.

This disorder is not more dangerous than a rheumatism, except in two cases; 1. When the pain is so very severe, that the patient strongly endeavours not to breathe at all, which brings on a great stuffing or stoppage in the lungs. 2. When this humour, like any other rheumatic one, is transferred to some internal part.

§ 294. It must be treated exactly like a rheumatism. See § 168, and 169.

After bleeding once or more, a blister applied to the affected part is often attended with a very good effect: This being indeed the kind of * pleurisy, in which it particularly agrees.

§ 225. This malady sometimes gives way to the first bleeding; often terminating on the third, fourth, or fifth day, by a very plentiful sweat, and rarely lasting beyond the seventh. Sometimes it attacks a person very suddenly, after a stoppage of perspiration; and then, if at once before the fever commences, and has had time to inflame the blood, the patient takes some *salfrank*; it effects a speedy cure by restoring perspiration. They are such cases as these, or that mentioned § 96, which have given this composition the reputation it has obtained in this disease: A reputation, nevertheless, which has every year proved tragical in its consequences to many peasants, who being deceived by some misleading resemblances in this distemper, have rashly and ignorantly made use of it in true inflammatory pleurisy.

* The Seneca rattle-snake root, already recommended in true pleurisy, is by Dr. Tennent found much more effectual in these spurious kinds: it is a native of North America, but there is a species of the same plant in this country, which would probably answer as well.

CHAP. XXI.

Of COLICKS.

Of the inflammatory colick.—The bilious colick.—The colick from indigestion, and of digestions.—The flatulent or windy colick.—The colick from taking cold.

SECT. 296.

THE name of Colick is commonly given to all pains that are felt in the belly; but by that word I mean all the pains that affect the stomach or the guts.

These pains may proceed from a great number of causes, and the greater part of them are chronical diseases, more frequent among inactive citizens, or sedentary artificers, than among common people of the country; therefore I shall speak only of the small number of these kinds of colicks that are the most common in villages. I have proved before, that in some diseases the patient is killed by forcing him into a sweat; in colicks, the patient is killed by endeavouring to expel the wind by spirituous liquors.

Of the Inflammatory Colick.

§ 297. The most violent kind of colick, and at the same time the most dangerous, is that which proceeds from the inflammation of the stomach, or intestines. It begins most commonly without any shivering, by a violent pain in the belly; the pain increases by degrees, the pulse becomes quick and hard, the patient feels a burning heat in all his belly; sometimes he has a watry diarrhoea, at other times he is rather costive and subject to vomitings. This is a very dangerous case; the countenance becomes red, the belly distends, and it cannot be touched without increasing violently the pains of the patient, who, besides his pain, has an extreme restlessness, his thirst is very great, no drink can quench it. The pain extends often to the loins, where it is very smart and sharp. The patient makes little urine, and what he makes is burning and red; he gets no rest; sometimes he raves. If the disease is not stopped till the pains are come to the greatest height, the patient begins to complain less, the pulse becomes less

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strong, less hard, but more quick; the face loses its redness, soon becomes pale; the parts around the eye become livid; the patient falls into a dull supineness, he loses entirely his strength; his face, hands, feet, and the whole body, except the belly, becomes cold; the skin of the belly turns bluish, weakness ensues, and the patient dies. There happens often, a moment before death, a plentiful evacuation by stool, of matter extremely foetid, and it is during that evacuation that the patient dies, with his bowels mortified.

When the disease attacks the stomach, the symptoms are the same; but the pain is felt higher up in the pit of the stomach, the patient vomits almost all that he takes, the torment is horrible, and the ravings come very soon. This distemper kills in a few days.

§ 298. The only method of succeeding in the cure of it is as follows:

1. Take a very large quantity of blood from the arm: This almost immediately diminishes the violence of the pains, and allays the vomiting, besides its contributing to the greater success of the other remedies. It is often necessary to repeat this bleeding within the space of two hours.

2. Whether the patient has a looseness, or has not, a glyster of a decoction of mallows, or of barley-water and oil, should be given every two hours.

3. The patient should drink very plentifully of almond-milk No. 4. or a ptisan of mallow flowers, or of barley, all which should be warm.

4. Flannels, dipped in hot or very warm water, should be continually applied over the belly, shifting them every hour, or rather oftener; for in this case they very quickly grow dry.

5. If the disease, notwithstanding all this, continues very obstinate and violent, the patient should be put into a warm water bath, the extraordinary success of which I have observed.

When the distemper is over, that is to say, when the pains have terminated, and the fever has ceased, so that the patient recovers a little strength, and gets a little sleep, it will be proper to give him a purge, but a very gentle one: Two ounces of manna, and a quarter of an ounce of Sedlitz * salt, dissolved in a glass of clear whey, is generally

* Our author recommends the Sedlitz salt, I suppose, from its

rally sufficient, at this period, to purge the most robust and hardy bodies. Manna alone may suffice for more delicate constitutions; as all acrid sharp purges would be highly dangerous, with regard to the great sensibility and tender condition of the stomach and of the intestines after this disease.

§ 299. It is sometimes the effect of a general inflammation of the blood, and is produced, like other inflammatory diseases, by extraordinary labour, very great heat, heating meats or drinks, &c. It is often the consequences of other colicks which have been injudiciously treated, and which otherwise would not have degenerated into inflammatory ones, as I have many times seen those colicks introduced after the use of heating medicines; one instance of which may be seen § 164.

§ 300. Ten days after I had recovered a woman out of a severe colick, the pains returned violently in the night; she, supposing them to arise solely from wind, hoped to appease them by drinking a deal of distilled walnut-water, which, far from producing any such effect, rendered them more outrageous. They soon were heightened to a surprising degree, which might reasonably be expected. Being sent for very early in the morning, I found her pulse hard, quick, short; her belly was tense and hard; she complained greatly of her loins: Her urine was almost entirely stopped; she passed but a few drops, which felt as it were scalding hot, and these with excessive pain. She went very frequently to the close-stool, with scarcely any effect; her anguish, heat, thirst, and the dryness of her tongue were even terrifying; and her wretched state, the effect of the strong hot liquor she had taken, made me very apprehensive for her. One bleeding, to the quantity of fourteen ounces, somewhat abated all the pains: She took several glysters, and drank off a few pots of orgeat in a few hours. By these means the disease was a little mitigated; by continuing the same drink and the glysters, the looseness abated, the pain of the loins went off, and she passed a considerable quantity of urine, which proved turbid, and then let fall a sediment, and the patient reco-

its being more easily procured in the countries for which he immediately wrote. But as it appears from Dr. Hoffman's experiments, not to differ essentially from Epsom salt, the latter may, in this country, be substituted in its place.

vered. Nevertheless, I verily believe, if the bleeding had been delayed two hours longer, this spirituous walnut-water would have been the death of her. During the progress of this violent disease no food is to be allowed; and we should not be too inattentive to such degrees of pain as sometimes remain after their severity is over, lest a scirrhus, an inward hard tumor, should be generated, which may occasion the most inveterate and tedious maladies.

§ 301. An inflammation of the intestines, and one of the stomach, may also terminate in an abscess, like an inflammation of any other part; and it may be apprehended that one is forming, when, though the violence of the pain abates, there still remains a slow, obtuse, heavy pain, with general inquietude, little appetite, frequent shiverings; the patient at the same time not recovering any strength. In such cases, the patient should be allowed no other drinks but what are directed in this chapter, and some soups, made of pulse, and other farinaceous food.

The breaking of the abscess may sometimes be discovered by a slight swoon or fainting fit, attended with a perceivable cessation of a weight or heaviness in the part where it was lately felt; and when the *pus*, or ripe matter, is effused into the gut, the patient sometimes has reachings to vomit, a swimming in the head, and the matter appears in the next stools. In this case there remains an ulcer within the gut, which, if either neglected or improperly treated, may pave the way to a slow wasting fever, and even to death. Yet this I have cured by making the patient live solely upon skimmed milk, diluted with one third part water, and by giving every other day a glass, consisting of equal parts of milk and water, with the addition of a little honey.

When the abscess breaks on the outside of the gut, and discharges its contents into the cavity of the belly, it becomes a very miserable case, and demands such further assistance as cannot be particularized here.

Of the bilious colick.

§ 302. The bilious colick discovers itself by very acute pains, but is seldom accompanied with a fever, at least not until it has lasted a day or two: And even if there should be some degree of a fever, yet the pulse, though quick,

quick, is neither strong nor hard : The belly is neither tense nor stretched as it were, nor burning hot, as in the former colick : The urine comes away with more ease, and is less high coloured : Nevertheless, the inward heat and thirst are considerable ; the mouth is bitter ; the vomiting or purging, when either of them attend it, discharge a yellowish humour or excrement, and the patient's head is often dizzy.

§ 303. The method of curing this is,

1. By injecting glysters of whey and honey ; or if whey is not readily procurable, by preparing the glyster, No. 5.

2. By making the sick drink considerably of the same whey, or of a ptisan made of the root of dogs-grass (the common grass) and a little juice of lemon, for want of which, a little vinegar and honey may be substituted in the place of it *.

3. By giving every hour one cup of the medicine No. 32 ; or where this is not to be had, half a drachm of tartar at the same short intervals.

4. Fomentations of warm water and half-baths are also very proper.

5. If the pains are sharp and violent, in a robust strong person, and the pulse is strong and tense, bleeding should be used to prevent an inflammation.

6. No other nourishment should be given except some thin soups, made from vegetables, and particularly of sorrel.

7. After plentiful dilution with the proper drink, if no fever supervenes, if the pains still continue, and the patient discharges but little by stool, he should take a moderate purge. That directed No. 47 is a very proper one.

§ 304. This bilious colick is habitual to many persons, and may be prevented or greatly mitigated by an habitual use of the powder No. 24 ; by submitting to a moderate retrenchment in the article of flesh-meat, and by avoiding heating and greasy food, and the use of milk.

Of Colicks from Indigestions, and of Indigestion.

§ 305. Under this appellation I comprehend all those colicks, which are either owing to any over-loading quan-

* Pullet, or rather chicken-broth, made very weak, may often do instead of ptisan, or serve for a little variety of drink. Beef also may be used for the same purpose.

tity of food taken at once; or to a mass or accumulation of aliments formed by degrees in such stomachs, as digest but very imperfectly; or which result from noxious mixtures of aliment in the stomach, such as that of milk and acids; or from food either not wholesome in itself, or degenerated into an unwholesome condition.

This kind of colick may be known from any of those causes having preceded it, by its pains, which are accompanied with great restlessness, and come on by degrees, being less fixed than in the colicks before treated of. These colicks are also without any fever, heat, or thirst, but accompanied with a giddiness of the head, and efforts to vomit, and rather with a pale, than a high-coloured visage.

§ 306. Those disorders, from the last causes, are scarcely ever dangerous in themselves, but may be made such by injudicious management, and doing more than is necessary or proper; as the only thing to be done, is to promote the discharges by warm drinks. There are a considerable variety of them, which seem equally good, such as warm water, or even cold water with a toast, with the addition either of a little sugar, or a little salt: A light infusion of chamomile, or of elder-flowers, common tea, or balm, it imports little which, provided the patient drinks plentifully of them: In consequence of which, the offending matter is discharged, either by vomiting, or a considerable purging; and the speedier and more in quantity these discharges are, the sooner the patient is relieved.

If the belly is remarkably full and costive, glysters of warm water and salt should be injected.

The expulsion of the obstructing matter is also facilitated, by rubbing the belly heartily with hot cloths.

Sometimes the humours, or other retained contents of the belly, are more pernicious from their quality than their quantity, and then the malady may be dissipated without the former discharges, by the irritating sharp humour being diluted, or even drowned, as it were, in the abundance of small watery drinks. When the pains invade first in the stomach, they become less sharp, and the patient feels less inquietude, as soon as the cause of the pain has descended out of the stomach into the intestines, whose sensations are something less acute than, or somewhat different from, those of the stomach.

It is often found that after these plentiful discharges, and when the pains are over, there remains a very disagreeable

greeable taste in the mouth, resembling the favour of rotten eggs. This may be removed by giving some doses of the powder No. 24, and drinking largely of good water.

It is an essential point in these cases, to take no food before a perfect recovery.

§ 307. Some have been absurd enough in them, to fly at once to some heating cordial confection, to Venice-treacle, anniseed-water, geneva, or red wine to stop these evacuations; but there cannot be a more fatal practice, since these evacuations are the only thing which can cure the complaint, and to stop them is to deprive the person, who was in danger of drowning, of the plank which might save him. Nay, should this endeavour of stopping them unhappily succeed, the patient is either thrown into a putrid fever, or some chronical tedious malady; unless nature, much wiser than such a miserable assistant, should prevail over the obstacles opposed to her recovery, and restore the obstructed evacuations by her own œconomy, in the space of a few days.

§ 308. Sometimes an indigestion happens, with very little pain or colick, but with violent reachings to vomit, inexpressible anguish, faintings, and cold sweats: And not seldom also the malady begins only with a very sudden and unexpected fainting: The patient immediately loses all his senses, his face is pale and wan, he has some hiccups rather than reachings to vomit, which joined to the smallness of his pulse, to the easiness of his respiring, or breathing, and to the circumstance of his being attacked immediately, or very soon after a meal, makes this disorder distinguishable from a real apoplexy. Nevertheless, when it rises to this height, with these terrible symptoms, it sometimes kills in a few hours. The first thing to be done is to throw up a sharp glyster, in which salt and soap are to be dissolved; next to get down as much salt and water as he can swallow; and if that is ineffectual, the powder No. 34, is to be dissolved in three cups of water; one half of which is to be given directly; and if it does not operate in a quarter of an hour, the other half. Generally speaking the patient's sense begins to return, as soon as he begins to vomit.

Of the flatulent or windy Colick.

§ 309. Every particular which constitutes our food, whether solid or liquid, contains much air, but some of

them more than others. If they do not digest soon enough, or but badly, which occasions a sensible escape of such air; if they are such as contain an extraordinary quantity of air; or if the guts being straitened or compressed any where in the course of their extent, prevent that air from being equally diffused (which must occasion a greater proportion of it in some places) then the stomach and the guts are distended by this wind, and this distention occasions these pains, which are called flatulent or windy.

This species of colick rarely appears alone and simple; but it is often complicated with, or added, as it were, to the other sorts, of which it is a consequence, and is more especially joined with the colick from indigestions, whose symptoms it multiplies and heightens. It may be known, like that, by the causes which have preceded it, by its not being accompanied either with fever, heat, or thirst; the belly's being large and full, though without hardness, being unequal in its largeness, which prevails more in one part of it than another, forming something like pockets of wind, sometimes in one part, sometimes in another; and by the patient's feeling some ease merely from the rubbing of his belly, as it moves the wind about; which escaping either upwards or downwards, affords him still a greater relief.

§ 310. When it is combined with any different species of the colick, it requires no distinct treatment from that species, and it is removed or dissipated by the medicines which cure the principal disease.

Sometimes however it does happen to exist alone, and then it depends on the windiness of the solid and liquid food of the person affected with it, such as the *must* or new wine, beer, especially very new beer, certain fruits, and garden stuff. It may be cured by a glyster; by chafing the belly with hot cloths; by the use of drink moderately spiced, and especially by camomile tea, to which a little cordial confection, or even Venice-treacle may be added. When the pains are almost entirely abated, and there is no fever, nor any unhealthy degree of heat; and if the patient is sensible of a weakness at stomach, he may take a little aromatic or spiced wine, or even a small cordial stomachic dram. It should be observed, that these are not to be allowed in any other kind of colick.

§ 311.

§ 311. When any person is frequently subject to collick-like pains, it is a sign that the digestive faculty is impaired, the restoring of which should be carefully attended to, without which the health of the patient must suffer considerably, and he must be very likely to contract many tedious and troublesome disorders.

Of Colicks occasioned by Cold.

§ 312. When any person has been very cold, and especially in his feet, it is very common for him to be attacked, within a few hours after it, with violent colic pains, in which heating and spirituous medicines are very pernicious, but which are easily cured by rubbing the legs well with hot cloths, and keeping them afterwards for a considerable time in warm water; advising them at the same time to drink freely of a light infusion of camomile or elder flowers.

The cure will be effected the sooner, if the patient is put to bed and sweats a little, especially in the legs and feet.

A woman who had put her legs into a pretty cold spring, after travelling in the height of summer, was very quickly after attacked with a most violent colick. She took different hot medicines; she became still worse; she was purged, but the distemper was still further aggravated. I was called in on the third day, a few hours before her decease.

In such cases, if the pain be excessive, it may be necessary to bleed*; to give a glyster of warm water; to keep the legs several hours over the steam of hot water, and afterwards in the water; to drink plentifully of an infusion of the flowers of the lime-tree, with a little milk; and if the distemper is not subdued by these means, blis-

* Though this may be one mark to determine us to the use of bleeding, especially where the causes mentioned by our author have preceded, yet it will always be safer to examine other circumstances of the patient's constitution, before we prescribe this remedy; should he be a strong vigorous person, with a firm, hard pulse, we may with safety and advantage have recourse to it: But if, on the contrary, he be weak and delicate, with a low, soft pulse, prudence requires that we should abstain from it.

ters should be applied to the legs, which I have known to be highly efficacious.

§ 313. It appears, through the course of this chapter, that it is necessary to be extremely on our guard against permitting the use of heating and spirituous medicines in colicks, as they may not only aggravate, but even render them mortal. In short, they should never be given; and when it is difficult to discover the real cause of the colick, I advise country people to confine themselves to the three following remedies, which cannot be hurtful in any sort of colick, and may remove as many as are not of a violent nature. First then, let glysters be frequently repeated. 2. Let the patient drink warm water plentifully, or elder tea. 3. Let the belly be often fomented in pretty warm water, which is the most preferable fomentation of any.

§ 314. I have mentioned nothing here of the use of any oils in this disease, as they agree but in very few species of colicks, and not at all in those of which I have been treating. For this reason I advise a total disuse of them, since they may be of bad consequence in many respects.

§ 315. Chronical diseases not coming within the plan of this work, I purposely forbear treating of any kind of those tedious colicks which afflict some people for many years: But I think it my duty to admonish such, that their torments being very generally occasioned by obstructions in the several bowels of the belly, or by some other fault, and more particularly in those organs which are intended to prepare the bile, they should, 1. Avoid with the greatest care, the use of sharp, hot, violent medicines, vomits, strong purges, elixirs, &c. 2. They should be thoroughly on their guard against all those who promise them a very speedy cure, by the assistance of some specific remedy, and ought really to consider such as mountebanks, into whose hands it is highly dangerous to trust themselves. 3. They should be persuaded, or rather convinced, that they can entertain no reasonable hope of being cured, without an exact conformity to a proper and judicious regimen, and a long perseverance in a course of mild and safe remedies. 4. They should continually reflect with themselves, that there is little difficulty in doing them great mischief; and that their complaints are of that sort, which require the greatest knowledge and prudence in those persons, to whom the treatment and cure of them are confided.

C H A P. XXII.

Of the Miserere, or Iliac Passion; and the Cholera Morbus.

The miserere—The cholera morbus.

S E C T. 316.

THESE disorders sweep off many country people, and the cause of their death is often not known; superstition attributes their death to poison, or to witchcraft.

§ 317. The iliac passion is the most tormenting of all diseases.

If the intestines are closed up in any part, by any cause whatever, all the food is stopped, and then it happens often, that this continual motion which is observed in the bowels to force every thing downwards, is done a direct contrary manner, and forces every thing towards the mouth.

The disease begins sometimes after a costiveness of some days; at other times, without that costiveness, having been preceded by pains in any part of the belly, especially round the navel, which pains increasing by degrees become at last very violent, and at the same time the patient has great anguish. Some feel a hard tumour round the belly as if it was a cord; flatulencies are heard, some come out upwards, and are followed by an inclination to vomit; and the vomiting, which supervene soon, increase always till the patient throws up all that he has taken, with an augmentation of inexpressible pains. At the beginning, he does only cast up the last food which he took, with some yellowish matter, and his drink; but afterwards the matter becomes stinking, and foetid; and when the disease is come to a great height, the matter has a smell which is called the smell of excrement, but which is more like the smell of a corrupted dead body. Sometimes likewise, if the patient has taken injections of a strong smell, the same is felt in what is vomited up. But I never saw any body vomit up real excrements, nor the composition of glysters, nor far less suppositories introduced into the fundament: If such a thing ever happened, it is very difficult how to account for it. During all the

the course of the distemper, the patient has not one stool, the belly is tense, the urine suppressed, and at other times thick and stinking. The pulse, which at first was pretty hard, becomes quick and slow; the strength is lost entirely, the patients rave; there comes on almost always a hiccup, and sometimes general convulsions; the extremities grow cold, the pulse is lost, the pains and vomitings cease, and the patient dies very speedily after.

§ 318. As, this disease is highly dangerous, the moment it is strongly apprehended, it is necessary to oppose it by proper means and remedies; the smallest error may be of fatal consequence, and hot inflaming liquids have been known to kill the patient in a few hours. I was called in the second day of the disease to a young person, who had taken a good deal of Venice-treacle, nothing could afford her any relief, and she died early on the third day.

This disease should be treated precisely in the same manner as an inflammatory colick; the principal difference being, that in the former there are no stools, but continual vomitings.

1. The patient should be plentifully bled, if the physician has been called in early enough, and before the sick has lost his strength.

2. He should receive opening glysters made of a decoction of barley-water, with five or six ounces of oil in each.

3. We should endeavour to allay the violent efforts to vomit, by giving every two hours a spoonful of the mixture No. 48.

4. The sick should drink plentifully, in very small quantities, very often repeated, of an appeasing, diluting, refreshing drink, which tends at the same time to promote both stools and urine. Nothing is preferable to the whey No. 49, if it can be had immediately, if not, give simple clear whey sweetened with honey, and the drinks prescribed § 298, art. 3.

5. The patient is to be put into a hot bath, and kept as long as he can bear it, repeating it as often daily too as his strength will permit.

6. After bleeding, warm bathing, repeated glysters and fomentations, if each and all of these have availed nothing, the fume or smoak of tobacco may be introduced in the manner of a glyster, of which I shall speak further, in the chapter on persons drowned,

I cured

I cured a person of this disease, by conveying him into a bath, immediately after bleeding him, and giving him a purge on his going into the bath.

§ 319. If the pain abates, before the patient has quite lost his strength; if the pulse improves at the same time; if the vomitings are less in number, and in the quantity of the matter brought up; if that matter seems in a less putrid offensive state; if he feels some commotion and rumbling in his bowels; if he has some little discharge by stool; and if at the same time he feels himself a little stronger than before, his cure may reasonably be expected; but if he is otherwise circumstanced he will soon depart. It frequently happens, a single hour before death, that the pain seems to vanish, and a surprising quantity of extremely foetid matter is discharged by stool, the patient is suddenly seized with a great weakness and sinking, falls into a cold sweat, and immediately expires.

§ 320. This is the disease which the common people attribute to, and term the *Twisting of the Guts*; and in which they make the patients swallow bullets, or large quantities of quick-silver. This twisting, tangling, or knotting of the guts is an utter, an impossible chimera; for how can they admit of such a circumstance, as one of their extremities, their ends, is connected to the stomach, and the other irremoveably fastened to the skin of the fork, or cleft of the buttocks: In fact this disease results from a variety of causes, which have been discovered on a dissection of those who have died of it. It were to be wished indeed this prudent custom, so extremely conducive to enrich and to perfect the art of physick, were to prevail more generally, and which we ought rather to consider as a duty to comply with, than a difficulty to submit to; as it is our duty to contribute to the perfection of a science, on which the happiness of mankind so considerably depends. I shall not enter into a detail of these causes; but whatever they are, the practice of swallowing bullets in the disease is always pernicious, and the like use of mercury must be often so. Each of these pretended remedies may aggravate the disease, and contribute an insurmountable obstacle to the cure.—Of that *Iliac Passion*, which is sometimes a consequence of ruptures, I shall treat in another place.

Of the Cholera Morbus.

§ 321. This disease is a sudden, abundant, and painful evacuation by vomiting and by stool.

It begins with much flatulence, or wind, with swelling and slight pains in the belly, accompanied with great dejection, and followed with large evacuations either by stool or by vomit at first, but whenever either of them has begun, the other quickly follows. The matter evacuated is either yellowish, green, brown, whitish, or black; the pains in the belly are violent, the pulse, almost constantly feverish, is sometimes strong at first, but soon sinks into weakness, in consequence of the prodigious discharge. Some patients purge a hundred times in the compass of a few hours: They may even be seen to fall away, and if the disease exists in a violent degree, they are scarcely to be known within three or four hours from the commencement of these discharges. After a great number of them they are afflicted with spasms, or cramps, in their legs, thighs, and arms, which torment them as much as the pains in the belly. When the disease rages too highly to be assuaged, hiccups, convulsions, and a coldness of the extremities approach; there is a scarcely intermitting succession of fainting, or swooning fits, the patient dying either in one of them, or in convulsions.

§ 322. This disease, which constantly depends on a bile raised to the highest acrimony, commonly prevails towards the end of July and in August, especially if the heats have been very violent, and there have been little or no summer fruits, which greatly conduce to attemper and allay the putrescent acrimony of the bile.

§ 323. Nevertheless, however violent this distemper may be, it is less dangerous, and also less tormenting than the former, many persons recovering from it.

1. Our first endeavour should be to dilute, or even to drown this acrid bile, by draughts, by deluges, of the most mitigating drinks; the irritation being so very great, that every thing having the least sharpness is injurious. Wherefore the patient should continually take in, by drink, and by way of glyster, either barley-water, almond-milk, or pure water, with one eighth part milk, which has succeeded very well in my practice. Or he may use a very light decoction, or ptisan, as it were of bread, which

which is made by gently boiling a pound of toasted bread, in three or four pots of water for half an hour. In *Switzerland* we prefer oat-bread. We also successfully use pounded rye, making a light ptisan of it.

A very light thin soup made of a pullet, a chicken, or of one pound of lean veal, in three pots of water, is very proper too in this disease. Whey is also employed to good purpose; and in those places where it can be easily had, butter-milk is the best drink of any. But, whichever of these drinks shall be thought preferable, it is a necessary point to drink very plentifully of it, and the glysters should be given every two hours.

2. If the patient is of a robust constitution, and sanguine complexion, with a strong pulse at the time of the attack, and the pains are very severe, a first, and in some cases a second bleeding, very early in the invasion, alluages the violence of the malady, and allows more leisure for the assistance of other remedies. I have seen the vomiting cease almost entirely after the first bleeding.

The rage of this disease abates a little after a duration of five or six hours: We must not however, during this remission or abatement, forbear to throw in proper remedies, since it returns soon after with great force, which return however indicates no alteration of the method already entered upon.

3. In general, the warm bath refreshes the patient while he continues in it; but the pains frequently return soon after he is taken out, which, however, is no reason for omitting it, since it has frequently been found to give a more durable relief. The patient should continue in it a considerable time, and during that time he should take six or seven glasses of the potion No. 32, which has been very efficacious in this disease. By these means the vomiting has been stopt; and the patient, upon going out of the bath, has had several large stools, which very considerably diminished the violence of the disease.

4. If the patient's attendants are terrified by these great evacuations, and determine to check them (however prematurely) by Venice-treacle, mint water, syrup of white poppies, called diacodium, by opium or mithridate, it either happens, that the disease and all its symptoms are heightened, to which I have been a witness; or, if the evacuations should actually be stopt, the patient, in consequence of it, is thrown into a more dangerous condition.

I have

I have been obliged to give a purge, in order to renew the discharges to a man, who had been thrown into a violent fever, attended with a raging *delirium*, by a medicine composed of Venice-treacle, mithridate, and oil. Such medicines ought not to be employed, until the smallness of the pulse, great weakness, violent and almost continual cramps, and even the insufficiency of the patient's efforts to vomit, make us dubious of his sinking irrecoverably. In such circumstances indeed he should take, every quarter or half quarter of an hour, a spoonful of the mixture, No. 50, still continuing the diluting drinks. After the first hour, they should only be given every hour, and that only to the extent of eight doles. But I desire to insist upon it here, that this medicine should not be taken too early in this distemper.

§ 324. If the patient is likely to recover, the pains and evacuations gradually abate; the thirst is less; the pulse continues very quick, but it becomes regular. There have been instances of their propensity to a dull kind of drowsiness at this time; for perfect refreshing sleep advances but slowly after this disease. It will still be proper to persevere in the medicines already directed, though somewhat less frequently. And now we may begin to allow the patient a few soups from farinaceous mealy substances; and as soon as the evacuations accompanying this disease are evidently ceased, and the pains are vanished, though an acute sensibility and great weakness continues, besides such soups, he may be allowed some new-laid eggs, very lightly boiled, or even raw, for some days. After this he must be referred to the regimen so frequently recommended to persons in a state of recovery: When the concurring use of the powder No. 24, taken twice a day, will greatly assist to hasten and to establish his health.

C H A P. XXIII.

Of the *DIARRHOEA*.

SECT. 325.

EVERY body knows the *Diarrhœa*, called by the common people Flux, and very often Colick. There are

are some of these diseases which last long, and are very inveterate; as they proceed from some essential fault of the constitution, I shall not speak of them. *V. to stop them*

Those which attack suddenly without any preceding distemper, unless it be a slight loathing, and heaviness in the loins and knees; which are not attended with strong pains nor a fever, (often there is no pain at all) are rather an advantage than disadvantage. The evacuate matter that has been long amassed and corrupted, which, were they not carried off, would produce some distemper, and far from weakening, these diarrhœas or purging render the body stronger, lighter and more nimble and active.

§ 326. These purgings then must not be stopped; they go away generally of themselves, when all the hurtful matter is discharged; and they require no medicine. All that ought to be done, is to diminish considerably the quantity of food; to abstain from eating flesh, eggs, and wine; to live on soup, pulse, or a little fruit, raw or baked, and to drink a little more than usual. A ptisan of capillaire, i. e. the syrup of maiden-hair, is very sufficient in this case; There is no need of treacle, confection, nor any drug of that kind.

§ 327. If it should happen that, after five or six days, the distemper should still continue, and thereby weaken the patient; if the pains become a little strong; and, above all, if the inclination of going to stool becomes more frequent, then it must be stopped. For that effect, he must be put into a regimen; and, if the diarrhœa was accompanied with a great loathing, risings at the stomach, foulness of the tongue, and a bad taste in the mouth, the powder No. 35, must be given to him. If these symptoms should not happen, the powder No. 51, should be administered, and during the three hours after this medicine he should take every half hour a cup of weak broth.

If the diarrhœa, stopped by this medicine, should return at the end of some days, it would be a proof that there remains a tenacious matter which has not been discharged. In this case the medicines No. 21, 23, or 47 must be given; and afterwards, the patient must take, fasting, for two mornings, the half of the powder No. 57.

On the evening of that day when the patient takes No. 35, or No. 51, or any other purge, he may take a small dose of Venice-treacle.

§ 328. A purging is often neglected for a long time, without observing the least regimen, from which neglect they degenerate into tedious, and as it were habitual, perpetual ones, and entirely weaken the patient. In such cases, the medicine No. 35, should be given first; then, every other day for four times successively, he should take No. 51: During all which time he should live on nothing but panada (see § 57,) or on rice boiled in weak chicken broth. A strengthening stomachic plaster has sometimes been successfully applied, which may be often moistened in a decoction of herbs boiled in wine. Cold and moisture should be carefully avoided in these cases, which frequently occasion immediate relapses, even after the looseness had ceased for many days.

C H A P. XXIV.

Of the DYSENTERY.

The symptoms of the disease.—The remedies against it.—Of the beneficial use of ripe fruits.—Of the danger of taking a great number of popular remedies in it.

S E C T. 329.

THE Dysentery is a flux of the belly, accompanied by a general uneasiness, strong gripings, and frequent inclinations to go to stool. There is commonly a little blood in the stools, but that does not happen always, and this is not sufficient to constitute a dysentery; for a dysentery without blood is not less dangerous.

§ 330. The dysentery is generally epidemical; it begins sometimes at the end of July, oftener in the month of August, and ends when the frosts begin. The great heats renders the blood and the bile sharp; as long as heats last the perspiration goes on, (see the introduction) but when the heats abate and diminish, especially in the mornings and evenings, that evacuation is far less, inasmuch as the humours have acquired by the great heats much thickness; then this acrid humour being stopped,

falls back on the intestines, and irritates them, and thereby the pains and evacuations succeed.

This kind of dysentery prevails at all times, and in all countries; but if to this cause others are added which are capable of corrupting the humours, such as a great number of persons crouded together in places too close, as hospitals, camps, or prisons, this puts into the humours a malignant principle, which joining to the cause of the dysentery renders that malady more fatal.

§ 331. The disorder begins by a general coldness, or rather by a shivering; and this continues for some hours; the patient soon loses his strength, he suffers great pains in the belly, which sometimes last many hours before the evacuations begin. He has vertigos, inclinations to vomit; he grows pale; his pulse however is hardly, if at all feverish, but it is generally small; at last the stools come on, the first ones are often of a liquid and yellowish matter, but very soon they are mixed with glairy matter, and that glairy matter is coloured with blood. Their colour varies; it is brown, green, black, more or less liquid, and foetid: The pains increase at each stool, and the stools become so frequent, that the patient has eight, ten, eleven, twelve, fifteen of them during the space of an hour, then the fundament is irritated, the tenesmus (which is an inclination of going to stool, though there is no matter inwardly) joins to the dysentery; and occasions often a falling down of the fundament; and this is a most excruciating pain for the patient, who discharges sometimes worms, thickened glairy matter, which resembles pieces of the guts, and sometimes clots of blood.

If the distemper rises to a violent height, the guts being inflamed, which terminates either in suppuration or in mortification, the miserable patient discharges pus, or black and foetid watery stools. The hiccup supervenes; he grows delirious; his pulse sinks; and he falls into cold sweats and faintings, which terminate in death.

A kind of phrenzy, or raging *delirium*, sometimes comes on before the minute of expiration. I have seen a very unusual symptom accompany this disease in two persons, which was an impossibility of swallowing, for three days before death.

But in general this distemper is not so extremely violent; the discharges are less frequent, being from twenty-five to forty within a day and night. Their contents are

less various and uncommon, and mixed with very little blood; the patient retains more strength; the number of stools gradually decrease; the blood disappears; the consistence of the discharges improves; sleep and appetite return, and the sick recovers.

Many of the sick have not the least degree of fever, nor of thirst, which perhaps is less common in this disease than in a simple purging or looseness.

Their urine sometimes is but in a small quantity; and many patients have ineffectual endeavours to pass it, to their no small affliction and restlessness.

§ 332. The most efficacious remedy for this disease is a vomit. That of No. 34, (when there is no present circumstance that forbids the giving a vomit) if taken immediately on the first invasion of it, often removes it at once, and always shortens its duration. That of No. 35, is not less effectual; it has been considered for some time even as a certain specific, which it is not, though a very useful medicine. If the stools prove less frequent after the operation of either of them, it is a good sign; if they are no ways diminished, we may apprehend the disease is like to be tedious and obstinate.

The patient is to be ordered to a regimen, abstaining from all flesh-meat with the greatest attention, until the perfect cure of the disease. The ptisan No. 3, is the best drink for him.

The day after the vomit, he must take the powder No. 51, divided into two doses: The next day he should take no other medicine but his ptisan; on the fourth the rhubarb must be repeated: After which the violence of the disease commonly abates. His diet during the disease is nevertheless to be continued exactly for some days: after which he may be allowed to enter upon that of persons in a state of recovery.

§ 333. The dysentery sometimes commences with an inflammatory fever; a feverish hard full pulse, with a violent pain in the head and loins, and a stiff distended belly. In such a case the patient must be bled once; and daily receive three or even four of the glysters No. 6, drinking plentifully of the drink No. 3.

When all dread of an inflammation is entirely over, the patient is to be treated in the manner just related: Though often there is no necessity for the vomit: And if the inflammatory symptoms have run high, his first purge should

should be that of No. 11, and the use of the rhubarb may be postponed, till about the manifest conclusion of the disease,

I have cured many dysenteries, by ordering the sick no other remedy, but a cup of warm water every quarter of an hour; and it were better to rely only on this simple remedy, which must be of some utility, than to employ those, of whose effects country people are ignorant, and which are often productive of very dangerous ones.

§ 334. It sometimes happens that the dysentery is combined with a putrid fever, which makes it necessary, after the vomit, to give the purges No. 23 or 47, and several doses of No. 24, before the rhubarb is given. No. 32 is excellent in this combined case.

There was in *Switzerland* in the autumn of 1755, after a very numerous prevalence of epidemical putrid fevers had ceased, a multitude of dysenteries, which had no small affinity with, or relation to, such fevers. I treated them first with the prescription No. 34, giving afterwards No. 32; and I directed the rhubarb only to a very few, and that towards the conclusion of the disease. By much the greater number of them were cured at the end of four or five days. A small proportion of them, to whom I could not give the vomit, or whose cases were more complicated, remained languid a considerable time, though without fatality or danger.

§ 335. When the dysentery is blended with symptoms of malignity (see § 245), after premising the prescription No. 35, those of No. 38 and 39 may be called in successfully.

§ 336. When the disease has already been of many days standing, without the patient's having taken any medicines, or only such as were injurious to him, he must be treated as if the distemper had but just commenced, unless some symptoms, foreign to the nature of the dysentery, had supervened upon it.

§ 337. Relapses sometimes occur in dysenteries, some few days after the patients appeared well; much the greater number of which are occasioned either by some error in diet, by cold air, or by being considerably over-heated. They are to be prevented by avoiding these causes of them; and may be removed by putting the patient on his regimen, and giving him one dose of the prescription No. 51. Should it return even without any such discoverable

causes, and if it manifests itself to be the same distemper renewed, it must be treated as such.

§ 338. This disease is sometimes combined too with an intermitting fever; in which case the dysentery must be removed first, and the intermittent afterwards. Nevertheless if at each access, the fits of the fever have been very strong, the bark must be given as directed § 259.

§ 339. One pernicious prejudice, which still generally prevails, is, that fruits are noxious in a dysentery, that they even give it, and aggravate it: and this perhaps is an extremely ill grounded one. In truth, bad fruits, and such as have not ripened well, in unseasonable years, may really occasion colicks, a looseness (though oftener a costiveness) and disorders of the nerves, and of the skin; but never can occasion an epidemical dysentery or flux. Ripe fruits, of whatever species, and especially summer fruits, are the real preservatives from this disease. The greatest mischief they can effect, must result from their thinning and washing down the humours, especially the thick glutinous bile, if they are in such a state; good ripe fruits being the true dissolvents of such; by which indeed they may bring on a purging, but such a one as is rather a guard against a dysentery.

We had a great, an extraordinary abundance of fruit in 1759 and 1760, but scarcely any dysenteries. It has been even observed to be more rare, and less dangerous than formerly; and if the fact is certain, it cannot be attributed to any thing more probably, than to the very numerous plantations of trees, which have rendered fruit very plenty, cheap and common. Whenever I have observed dysenteries to prevail, I made it a rule to eat less flesh, and plenty of fruit; I have never had the slightest attack of one; and several physicians use the same caution with the same success.

I have seen eleven patients in a dysentery in one house, of whom nine were very tractable; they eat fruit and recovered. The grandmother and one child, whom she loved more than the rest, were carried off. She managed the child after her own fashion, with burnt wine, oil and some spices, but no fruit. She conducted herself in the very same manner, and both died.

In a country seat near *Berne*, in the year 1751, when these fluxes made great havock, and people were severely warned against the use of fruits, out of eleven persons in
the

the family, ten eat plentifully of prunes, and not one of them was seized with it: The poor coachman alone rigidly observed that abstinence from fruit enjoined by this prejudice, and took a terrible dysentery.

This same distemper had nearly destroyed a Swiss regiment in garrison in the south of *France*; the captains purchased the whole crop of several acres of vineyard; there they carried the sick soldiers, and gathered the grapes for for such as could not bear being carried into the vineyard, those who were well eating nothing else: After this not one more died, nor were any more even attacked with the dysentery.

A clergyman was seized with a dysentery, which was not in the least mitigated by any medicines he had taken. By mere chance he saw some red currants; he longed for them, and eat three pounds of them between seven and nine o'clock in the morning; that very day he became better, and was entirely well on the next.

I could greatly enlarge the number of such instances; but these may suffice to convince the most incredulous, whom I thought it might be of some importance to convince. Far from forbidding good fruit, when dysenteries rage, the patients should be encouraged to eat them freely; and the directors of the police, instead of prohibiting them, ought to see the markets well provided with them. It is a fact of which persons, who have carefully informed themselves, do not in the least doubt. Experience demonstrates it, and it is founded in reason, as good fruit counter-operates all the causes of dysenteries *.

§ 340. It is important and even necessary, that each subject of this disease should have a close-stool or convenience apart to himself, as the matter discharged is extremely infectious. And if they make use of bed-pans, they

* The experience of all countries and times so strongly confirms these important truths, that they cannot be too often repeated, too generally published, whenever and wherever this disease rages. The succession of cold showers to violent heats; too moist a constitution of the air; an excess of animal food; uncleanness and contagion, are the frequent causes of epidemical fluxes.

This account of the causes given by the Lyons Editor, is exactly conformable to the sentiments of Dr. Pringle, whose extensive practice in the army must add no little weight to his opinion.

should be carried immediately out of the chamber, the air of which should be continually renewed, burning vinegar frequently in it.

It is also very necessary to change the patient's linen frequently; without all which precautions the distemper becomes more violent, and attacks others who live in the same house. Hence it is greatly to be wished the people in general were convinced of these truths.

It was BOERHAAVE's opinion, that all the water which was drank, while dysenteries were epidemical, should be *stunned* as we term it, or sulphurized.

§ 341. It has happened by some unaccountable fatality, that there is no disease, for which a greater number of remedies are advised, than for the dysentery. There is scarce any person but what boasts of his own prescription in preference to all the rest, and who does not boldly engage to cure, and that within a few hours, a tedious severe disease, of which he has formed no just notion, with some medicine or composition, of whose operation he is totally ignorant: While the poor sufferer, restless and impatient, swallows every body's recommendation, and gets poisoned either through fear, disgust, or weariness, or through entire complaisance. Of these many boasted compositions, some are only indifferent, but others pernicious. I shall not pretend to detail all I know myself, but after repeatedly affirming, that the only true method of cure is that I have advised here, the purpose of which is evacuating the offending matter; I also affirm that all those methods, which have a different scope or drift are pernicious; but shall particularly observe, that the method most generally followed, which is that of stopping the stools by astringents, or by opiates, is the worst of all, and even so mortal a one as to destroy a multitude of people annually, and which throws others into incurable diseases. By preventing the discharge of these stools, and inclosing the wolf in the fold, it either follows, 1, that this * retained matter irritates and inflames the bowels, from which inflammation excruciating pains arise, an acute inflammatory colick, and fi-

* As rhubarb is in some measure astringent, and may produce these effects, though perhaps in a smaller degree, it has been found less serviceable in camp dysenteries, than manna joined with salts: See Dr. HUCK's method of treating this disease in the 4th edition of Pringle, chap. on the Dysentery.

nally

nally a mortification and death; or a *schirrhus*, which degenerates into a *cancer*, (of which I have seen a dreadful instance) or else an abscess, suppuration and ulcer. Or 2, this arrested humour is repelled elsewhere, producing a *schirrhus* in the liver, or asthmas, apoplexy, epilepsy, or falling sickness; horrible rheumatic pains, or incurable disorders of the eyes, or of the teguments, the skin, and surface.

Such are the consequences of all the astringent medicines, and of those which are given to procure sleep in this disease, as Venice-treacle, mithridate and diascordium, when given too early in dysenteries.

I have been consulted on account of a terrible rheumatism, which ensued immediately after taking a mixture of Venice-treacle and plaitain, on the second day of a dysentery.

As those who advise such medicines, are certainly unaware of their consequences, I hope this account of them will be sufficient to prevent their repetition.

§ 342. Neither are purges without their abuse and danger; they determine the course of all the humours more violently to the tender afflicted parts; the body becomes exhausted, the digestions fail, the bowels are weakened, and sometimes even lightly ulcerated; whence incurable *diarræhas* or purgings ensue, and prove fatal after many years affliction.

§ 343. If the evacuations prove excessive, and the distemper tedious, the patient is likely to fall into a dropy; but if this is immediately opposed, it may be removed by a regular and drying diet, by strengthners, by friction, and proper exercise.

CHAP. XXV.

Of the ITCH.

SECT. 344.

THE Itch is a distemper that infects by touching an infected person or his cloaths; but the air has no effect, so that one can be sure of not being infected by shunning these causes of the contagion.

Although all the parts of the body be attacked by the itch,

itch, yet it appears generally at first on the hands, and chiefly between the fingers. At first one or two pimples appear, which are full of a kind of clear water, and which produce a very troublesome itching. If by scratching, these pustules are broken, the humour that comes from them communicates the infection to the adjacent parts. In the beginning it is difficult to know whether it is the itch, unless one is well acquainted with the nature of that disease; but in its progress the pimples increase in number and bigness; when they are opened by scratching loathsome crusts of scab are formed, and the infection extends to all the surface of the body; if they last a long time, they form small ulcers, and are at the same time very contagious.

§ 345. A bad diet, especially too much eating salt meat, unripe fruit, want of cleanliness, produce this malady; but it is more frequently contracted by infection. Very able Physicians believe, that it is not contracted any otherwise; but I have seen pretty evidently the contrary.

When the infection appears on a person who cannot be suspected to have got it by contagion, then he must begin by refraining from all salt meat, sour things, fat meat, and spiceries. He must drink a ptisan of the root of bitter succory, or that of No. 26, of which he takes daily five or six glass fulls, and at the end of four or five days he is purged with No. 21, or with an ounce of Sedlitz salt. The regimen must be continued five or six days after he is purged again, and all the infected parts, and all parts around them, are rubbed in the morning, the patient being fasting, with the fourth part of the ointment No. 52. The four next days he is rubbed anew, and afterwards a second dose of the ointment ought to be used, but only rubbing every other day. This method seldom fails curing the malady; but if it should fail, then the patient must be purged again, and rubbed again with the ointment; the good effects of which I have experienced, and do experience every day.

§ 346. While these medicines are employed, the patient must avoid all cold and wet, especially if he makes use of No. 28 *, in which there is quicksilver: which, if
such

* Mercury too, when taken for a considerable time, is ve-

such precautions were neglected, might bring on a swelling of the throat and gums, and even rise to a salivation. Yet this pintment has one advantage in its having no smell, and being susceptible of an agreeable one; while it is very difficult to disguise the disagreeable odour of the other.

The linen of a person in this disease ought to be often changed; but his upper cloaths must not be changed; because these having been infected, might, when worn again, communicate the itch to the wearer again, after he had been cured.

Shirts, breeches, and stockings may be fumigated with sulphur, before they are put on; and this fumigation should be made in the open air.

§ 347. If this disorder becomes very inveterate and tedious, it exhausts the patient, in consequence of its not allowing him to sleep at nights, as well as by his restless irritation; and sometimes even brings on a fever, so that he falls away in flesh, and his strength abates.

In such a case he must take, 1. A gentle purge.

2. Make use frequently of warm baths.

3. He must be put on the regimen of persons in a state of recovery.

4. He must take, morning and evening, fifteen days successively, the powder No. 53, with the ptisan No. 26.

This malady is often very obstinate, and then the medicines must be varied according to the circumstances, the detail of which I avoid here.

ry liable, especially with the concurrence of cold, to produce tremblings; and which, among other symptoms, may even occasion binding and paralytic disorders. The miners who furnish it, we are told, often die of them. They may be cured at first by exciting a free and gentle perspiration. For this purpose the patient should use the warm bath just before going to bed, should lie between two blankets, and drink weak thin sack or vinegar whey, with spirit minderi dissolved in it. Or he may use the Dovers powder, or antimonial wine, with tincture or opium. Where these fail, other remedies must be called in. Purges must be used once or twice a week, or oftener, if the patient's strength will bear it. Perhaps sulphur may be the most useful here, as it is remarkable in destroying the effects of quicksilver, and will not weaken the patient. Blisters applied to the parts affected, as well as frictions with the volatile oil, will produce remarkable good effects: and should these fail, the patient may, last of all, be electrified once a day, going afterwards to bed.

§ 348. After giving repeated purges in such obstinate cases, mineral waters abounding with sulphur, such as * those of Yverdun, &c. often effect a cure; and simple cold bathings in rivers or lakes have sometimes succeeded in very inveterate cases of this disorder.

Nothing conduces more to the long continuance of this malady, than the abuse of hot waters, such as infusions of tea, &c.

§ 349. I shall conclude this chapter with a repeated injunction not to be too free or rash in the use of the ointment No. 52, and other outward remedies for extinguishing the itch. There is hardly any complaint, but what has been found to be the consequence of too sudden a removal of this disorder by outward applications, before due evacuations have been made, and a moderate abatement of the sharpness of the humours has been effected.

C H A P. XXVI.

The Treatment of diseases peculiar to Women.

Of the monthly customs.—Of gravitation, or going with child.—Of labours or deliveries.—Of their consequences.—Of a cancer.

S E C T. 350.

BESIDES all the proceeding diseases, to which women are liable in common with men, their sex also exposes them to others peculiar to it, and which depend upon four principal sources; which are their monthly discharges, their pregnancy, their labours in child-birth, and the consequences of their labours. It is not my present design to treat professedly on each of the diseases arising from these causes, which would require a larger volume than I have proposed; but I shall confine myself to certain general directions on these four heads.

§ 351. Nature, who intended women for the increase, and the nourishment of the human race at the breast, has subjected them to a periodical efflux, or discharge of blood:

• In this country the waters of Moffat and St. Bernard's well may be used instead.

Which

Which circumstance constitutes the source, from whence the infant is afterwards to receive nutrition and growth.

This discharge commences generally with us, between the age of sixteen and eighteen. Young maidens before the appearance of this discharge, are often, and many for a long time, in a state of weakness, attended with various complaints, which is termed the *Clorosis*, or Green Sickness, and obstructions: And when their appearance is very slow and backward, it occasions very grievous, and sometimes even mortal diseases. Nevertheless it is too usual, though very improper, to ascribe all the evils, to which they are subject at this term of life, solely to this cause; while they really often result from a different cause, of which the obstructions themselves are sometimes only the effect: and this is the natural, and in some degree, even necessary feebleness of the sex. The fibres of women which are intended to be relaxed, and to give way, when they are unavoidably extended by the growth of the child, and its inclosing membranes (which frequently arise to a very considerable size) should necessarily be less stiff and rigid, less strong, and more lax and yielding than the fibres of men. Hence the circulation of their blood is more slow and languid than in males; their blood is less compact and dense, and more watery; their fluids are more liable to stagnate in their different bowels, and to form infractions and obstructions.

§ 352. The disorders to which such a constitution subjects them, might in some measure be prevented, by assisting that languor or feebleness of their natural movements, with such an increase of their force, as exercise might contribute to: But this assistance, which in some manner is more necessary for females than males, they are partly deprived of, by the general education and habitude of the sex; as they are usually employed in managing household business, and such light sedentary work, as afford them less exercise and motion, than the more active occupations of men. They stir about but little, whence their natural tendency to weakness increases from habit, and thence becomes morbid and sickly. Their blood circulates imperfectly; its qualities become impaired; the humours tend to a pretty general stagnation; and none of the vital functions are completely discharged.

From such causes and circumstances they begin to sink into a state of weakness, sometimes while they are very young, and many years before this periodical discharge could

could be expected. This state of languor disposes them to be inactive; a little exercise soon fatigues them, whence they take none at all. It might prove a remedy, and even effect a cure, at the beginning of their complaint; but as it is a remedy that is painful and disagreeable to them, they reject it, and thus increase their disorders.

Their appetite declines with the other vital functions, and gradually becomes still less; the usual salutary kinds of food never exciting it; instead of which they indulge themselves in whimsical cravings, and often of the oddest and most improper substances for nutrition, which entirely impair the stomach with its digestive functions, and consequently health itself.

But sometimes after the duration of this state for a few years, the ordinary time of their monthly evacuations approaches, which however make not the least appearance, for two reasons. The first is, that their health is too much impaired to accomplish this new function, at a time when all the others are so languid: And the second is, that under such circumstances, the evacuations themselves are unnecessary; since their final purpose is to discharge (when the sex are not pregnant) the superfluous blood, which they were intended to produce, and whose retention would be unhealthy, when not applied to the growth of the fœtus, or nourishment of the child: and this superfluity of blood does not exist in women, who have been long in a very low and languishing state.

§ 353. Their disorder however continues to increase, as every one daily must, which does not terminate. This increase of it is attributed to the suppression or non-appearance of their monthly efflux, which is often erroneous; since the disorder is not always owing to that suppression, which is often the effect of their distemperature. This is so true, that even when the efflux happens, if their weakness still continues, the patients are far from being the better for it, but the reverse. Neither is it unusual to see young lads, who have received from nature, and from their parents, a sort of feminine constitution, education and habitude, infested with much the same symptoms, as obstructed young women.

Country girls, who are generally more accustomed to such hardy work and exercise as country men, are less subject to these complaints, than women who live in cities.

§ 354. Let people then be careful not to deceive them-

themselves on this important account ; since all the complaints of young maidens are not owing to the want of their customs. Nevertheless it is certain there are some of them, who are really afflicted from this cause. For instance, when a strong young virgin in full health, who is nearly arrived to her full growth, and who manifestly abounds with blood, does not obtain this discharge at the usual time of life, then indeed this superfluous blood is the fountain of very many disorders, and generally more violent ones than those which result from the contrary causes already mentioned.

If the lazy inactive city girls are more subject to the obstructions, which either arise from the weakness and languor I have formerly taken notice of, or which accompany it ; country girls are more subject to complaints from this latter cause (too great a retention of superfluous blood) than women who live in cities : And it is this last cause that excites those singular disorders, which appear so supernatural to the common people, that they ascribe them to sorcery.

§ 355. Even after these periodical discharges have appeared, it is known that they have often been suppressed without the least unhealthy consequence resulting from that suppression. They are suppressed in the circumstances mentioned § 351, by a continuance of the disease, which was first an obstacle or retardment to their appearance ; and, in other cases, they have been suppressed by other causes, such as cold, moisture, violent fear, and very strong passion, by too chilly a course of diet, with indigestion, or too hot and irritating diet, by drinks cooled with ice, by exercise too long continued, and by unusual watching. The symptoms, occasioned by such suppressions, are sometimes more violent than those, which preceded the first appearance of the discharge.

§ 356. The great facility with which this evacuation may be suppressed, diminished, or disordered, by the causes already assigned ; the terrible evils which are the consequences of such interruptions and irregularities of them, seem to me very cogent reasons to engage the sex to use all possible care, in every respect, to preserve the regularity of them ; by avoiding, during their approach and continuance, every cause that may prevent or lessen them. Would they be thoroughly persuaded, not solely by my advice, but by that of their mothers, their relations,

ons, their friends, and by their own experience, of what great importance it is to be very attentive to themselves, at those critical times, I think there is not one woman, who, from the first to the very last appearance of them, would not conduct herself with the most scrupulous regularity.

Their demeanour, in these circumstances, very fundamentally concerns their own health, as well as that of their children; and consequently their own happiness, as well as that of their husbands and families.

The younger and more delicate they are, caution becomes the more necessary for them. I am very sensible a strong country girl is too negligent in regulating herself at those critical seasons, and sometimes without any ill consequence; but at another time she may suffer severely for it: And I could produce a long list of many, who, by their imprudence on such occasions, have thrown themselves into the most terrible condition.

Besides the caution with which females should avoid these general causes, just mentioned in the preceding section, every person ought to remember what has most particularly disagreed with her during that term, and for ever constantly to reject it.

§ 357. There are many women whose customs visit them without the slightest impeachment of their health: Others are sensibly disordered on every return of them; and to others again they are very tormenting, by the violent colicks, of a longer or shorter duration, which precede or accompany them. I have known some of these violent attacks last but some minutes, and others which continued a few hours. Nay some indeed have persisted for many days, attended with vomiting, fainting, with convulsions from excessive pain, with vomiting of blood, bleedings from the nose, &c. which, in short, have brought them to the very jaws of death. So very dangerous a situation requires the closest attention; though, as it results from several and frequently very opposite causes, it is impossible within the present plan, to direct the treatment that may be proper for each individual. Some women have the unhappiness to be subject to these symptoms every month, from the first appearance, to the final determination of these discharges; except proper remedies and regimen, and sometimes a happy child-birth, remove them. Others complain but now and then, every second
third,

third, or fourth month; and there are some again, who having suffered very severely during the first months, or years, after the first eruptions, suffer no more afterwards. A fourth number, after having had their customs for a long time, without the least complaint, find themselves afflicted with cruel pains, at every return of them, if by imprudence, or some inevitable fatality, they have incurred any cause, that has suppressed, diminished, or delayed them. This consideration ought to suggest a proper caution even to such as generally undergo these discharges, without pain or complaint: Since all may be assured, that though they suffer no sensible disorder at that time; they are nevertheless more delicate, more impressible by extraneous substances, more easily affected by the passions of the mind, and have also weaker stomachs at these particular periods.

§ 358. These discharges may also be sometimes too profuse in quantity, in which case the patients become obnoxious to very grievous maladies; into the discussion of which however I shall not enter here, as they are much less frequent than those arising from a suppression of them; Besides which, in such cases, recourse may be had to the directions I shall give hereafter, when I treat of that loss of blood, which may be expedient during the course of gravitation or pregnancy. See § 365.

§ 359. Finally, even when they are the most regular, after their continuance for a pretty certain number of years (rarely exceeding thirty-five) they go off of their own accord, and necessarily, between the age of forty-five and fifty; sometimes even sooner, but seldom continuing longer: And this *crisis* of their ceasing is generally a very troublesome, and often a very dangerous one for the sex.

§ 360. The evils mentioned § 352, may be prevented, by avoiding the causes, producing them; and, 1. By obliging your maidens to use considerable exercise; especially as soon as there is the least reason to suspect the approach of this disorder, the *Chlorosis*, or green sickness.

2. By watching them carefully, that they eat nothing unwholesome or improper: as there are scarcely any natural substances, even among such as are most improper for them, and the most distasteful, which have not sometimes been the object of their sickly, their unaccountable cravings. Fat aliments, pastry, farinaceous or mealy, and sour and watery foods are pernicious to them. Herb-

teas, which are frequently directed as a medicine for them, are sufficient to throw them into the disorder, by increasing that relaxation of their fibres, which is a principal cause of it. If they must drink any such infusions, as medicated drinks, let them be taken cold: But the best drink for them is water, in which red hot iron has been extinguished.

3. They must avoid hot sharp medicines, and such as are solely intended to force down their terms, which are frequently attended with very pernicious consequences, and never do any good: And they are still the more hurtful, as the patient is the younger.

4. If the malady increases, it will be necessary to give them some remedies; but these should not be purges, nor consist of diluters, and decoctions of herbs, salts, and a heap of other useless and noxious ingredients; but they should take filings of iron, which is the most certain remedy in such cases. These filings should be of true simple iron, and not from steel; and care should be taken that it be not rusty, in which state it has very little effect.

At the beginning of this distemper, and to young girls, it is sufficient to give twenty grains daily, enjoining due exercise and a suitable diet. When it prevails in a severer degree, and the patient is not so young, a quarter of an ounce may be safely ventured on: Certain bitters or aromatics may be advantageously joined to the filings, which are numbered in the appendix, 54, 55, 56, and constitute the most effectual remedies in this distemper, to be taken in the form of powder, of vinous infusion, or of electary*. When there is a just indication to bring down the discharge, the vinous infusion No. 55 must be given, and generally succeeds: But I must again repeat it (as it should carefully be considered) that the stoppage or obstruction of this discharge is frequently the effect, not the cause, of this disease: and that there should be no attempt to force it down, which, in such a case, may sometimes prove more hurtful than beneficial; since it would naturally return of its own accord, on the recovery, and with the strength of the patient: As their return should follow that

* The *French* word here, *opiat*, is sometimes used by them for a compound medicine of the consistence of an electary; and cannot be supposed, in this place, to mean any preparation into which *opium* enters.

of perfect health, and neither can precede health nor introduce it. There are some cases particularly, in which it would be highly dangerous to use hot and active medicines; such cases, for instance, as are attended with some degree of fever, a frequent coughing, a hæmorrhage, or bleeding, with great leanness and considerable thirst; all which complaints should be removed, before any hot medicines are given to force this evacuation, which many very ignorantly imagine cures all other female disorders; an error, that has prematurely occasioned the loss of many women's lives.

§ 361. While the patient is under a course of these medicines, she should not take any of those I have forbidden in the preceding sections; and the efficacy of these should also be furthered with proper exercise. That in a carriage is very healthy; dancing is so too, provided it be not extended to an excess. In case of a relapse in these disorders, the patient is to be treated, as if it were an original attack.

§ 362. The other sort of obstructions described § 354, requires a very different treatment. Bleeding, which is hurtful in the former sort, and the use, or rather abuse, of which has thrown several young women into irrecoverable weaknesses, has often removed this latter species, at it were in a moment. Bathing of the feet, the powders No. 20, and whey, have frequently succeeded: But as other times it is necessary to accommodate the remedies and the method to each particular case, and to judge of it from its own peculiar circumstances and appearances.

§ 363. When these evacuations naturally cease through age (see § 359), if they stop suddenly and all at once, and had formerly flowed very largely, bleeding must, i. necessarily be directed, and repeated every six, every four, or even every three months.

2. The usual quantity of food should be somewhat diminished, especially of flesh, of eggs, and of strong drink.

3. Exercise should be increased.

4. The patient should frequently take, in a morning, fasting, the powder No. 24, which is very beneficial in such cases; as it moderately increases the natural excretions by stool, urine, and perspiration; and thence lessens that quantity of blood, which would otherwise superabound.

Nevertheless, should this total cessation of the monthly

discharge

discharge be preceded by, or attended with any extraordinary loss of blood, which is frequently the case, bleeding is not so necessary; but the regimen and powder just directed are very much so; to which the purge No. 23, should now and then be joined, at moderate intervals. The use of astringent medicines at this critical time might dispose the patient to a cancer of the womb.

Many women die about this age, as it is but too easy a matter to injure them then; a circumstance that should make them very cautious and prudent in the medicines they recur to. On the other hand, it also frequently happens, that their constitutions alter for the better, after this critical time of life; their fibres grow stronger; they find themselves sensibly more hearty and hardy; many former slight infirmities disappear, and they enjoy a healthy and happy old age. I have known several who threw away their spectacles at the age of fifty-two, or fifty-three, which they had used five or six years before.

The regimen I have just directed, the powder No. 24, and the potion No. 32, agree very well in almost all inveterate discharges (I speak of the female peasantry) at whatever time of life.

Of Disorders attending Gravitation, or the term of going with child.

§ 364. Gravitation is generally a less ailing or unhealthy state in the country, than in very populous towns. Nevertheless country women are subject, as well as citizens, to pains of the stomach, to vomiting in a morning, to head-ach and tooth-ach; but these complaints very commonly yield to bleeding, which is almost the only remedy necessary for pregnant women*.

§ 365.

* Too great a fulness of blood is undoubtedly the cause of all these complaints; but as there are different methods of opposing this cause, the gentlest should always be preferred; nor should the constitution become habituated to such remedies, as might either impair the strength of the mother, or of her fruit. Some expedients therefore should be thought of, that may compensate for the want of bleeding, by enjoining proper exercise in a clear air, with a less nourishing, and a less juicy diet. E. L.

There is not so much room for this remark of the Lyons Editor,

§ 365. Sometimes after carrying too heavy burthens ; after too much or too violent work ; after receiving excessive jolts, or having had a fall, they are subject to violent pains of the loins, which extend down to their thighs, and terminate quite at the bottom of their belly ; and which commonly import, that they are in danger of an abortion, or miscarrying.

To prevent this consequence, which is always dangerous, they should, 1. Immediately go to bed ; and if they have not a mattress, they should lie upon a bed stuffed with straw, a feather-bed being very improper in such cases. They should repose, or keep themselves quite still in this situation for several days, not stirring, and speaking as little as possible.

2. They should directly lose eight or nine ounces of blood from the arm.

3. They should not eat flesh, flesh-broth, nor eggs ; but live solely on soups made of farinaceous or meally substances.

4. They should take every two hours half a paper of the powder No. 20 ; and should drink nothing but the ptisan No. 2.

Some sanguine robust women are very liable to miscarry at a certain time or state of their pregnancy. This may be obviated by their bleeding some days before that time approaches, and by their observing the regimen I have advised. But this method would avail very little for delicate citizens, who miscarry from a very different cause ; and whose abortions are to be prevented by a very different treatment.

Editor, as at first sight appears. It is allowed on all hands, that a superfluous quantity of blood occasions all those complaints with which women with-child are troubled : Now the evacuation of it, by bleeding or otherwise, can be attended with no bad effects either to mother or child, since it certainly is unnecessary to either, and will probably be prejudicial to both : Nor is there any danger of the mother's becoming habituated to this remedy ; since one bleeding will for the most part suffice, and that no very plentiful one either ; especially as we may assist this principal remedy by others of a more gentle kind ; such as by emollient glysters, and gentle purgatives, moderate exercise, and a thin spare diet. B.

Of Delivery or Child-birth..

§ 366. It has been observed that a greater proportion of women die in the country, in, or very speedily after, their delivery, and that from the scarcity of good assistance, and the great plenty of what is bad; and that a greater proportion of those in cities die after their labours are effected, by a continuance of their former bad health.

The necessity there is for better instructed, better qualified midwives, through a great part of *Switzerland*, is but too manifest an unhappiness, which is attended with the most fatal consequences, and which merits the utmost attention of the government.

The errors which are incurred, during actual labour, are numberless, and too often indeed are also irremediable. It would require a whole book, expressly for that purpose, (and in some countries there are such) to give all the directions that are necessary to prevent so many fatalities: And it would be as necessary to form a sufficient number of well-qualified midwives to comprehend and to observe them; which exceeds the plan of the work I have proposed. I shall only mark out one of the causes, and the most injurious one on this occasion: This is the custom of giving hot irritating things, whenever the labour is very painful, or is slow; such as castor, or its tincture, saffron, sage, rue, savin, oil of amber, wine, Venice-treacle, wine burnt with spices, coffee, brandy, aniseed-water, walnut-water, fennel-water, and other drams or strong liquors. All these things are so many poisons in this respect, which, very far from promoting the woman's delivery, render it more difficult, by inflaming the womb (which cannot then so well contract itself,) and the parts through which the birth is to pass, in consequence of which they swell, become more straitened, and cannot yield or be dilated. Sometimes these stimulating hot medicines also bring on hæmorrhages, which prove mortal in a few hours.

§ 367. A considerable number, both of mothers and infants, might be preserved by the directly opposite method. As soon as a woman who was in very good health, just before the approach of her labour, being robust and well made, finds her travail come on, and that it is painful and difficult; far from encouraging those premature efforts,

efforts, which are always destructive; and from furthering them by the pernicious medicines I have just enumerated, the patient should be bled in the arm, which will prevent the swelling and inflammation, assuage the pains, relax the parts, and dispose every thing to a favourable issue.

During actual labour no other nourishment should be allowed, except a little panada every three hours, and as much toast and water as the woman chuses.

Every fourth hour a glyster should be given, consisting of a decoction of mallows and a little oil. In the intervals between these glysters she should be set over a kind of stove, or in a pierced easy chair, containing a vessel in which there is some hot water: The passage should be gently rubbed with a little butter; and stupes, wrung out of a fomentation of simple hot water, which is the most efficacious of any, should be applied over the belly.

The midwives, by taking this method, are not only certain of doing no mischief, but they also allow nature an opportunity of doing good; as a great many labours, which seem difficult at first, terminate happily: and this safe, and unprecipitate manner of proceeding at least affords time to call in further assistance. Besides, the consequences of such deliveries are healthy and happy; when, by pursuing the heating oppressing practice, even though the delivery be effected, both the mother and infant have been so cruelly, though undesignedly, tormented, that both of them frequently perish.

§ 368. I acknowledge these means are insufficient, when the child is unhappily situated in the womb, or when there is an embarrassing confirmation in the mother: Though at least they prevent the case from proving worse, and leave time for calling in men-midwives, or other female ones, who may be better qualified.

I beg leave again to remind the midwives, that they should be very cautious of urging their women to make any forced efforts to forward the birth, which are extremely injurious to them, and which may render a delivery very dangerous and embarrassing, that might otherwise been happily effected: and I insist the more freely on the danger attending these unseasonable efforts, and on the very great importance of patience, as the other very pernicious practice is become next to universal amongst us.

The weakness in which the labouring woman appears makes the by-standers fearful that she will not have strength enough to be delivered; which they think abundantly justifies them in giving her cordials; but this way of reasoning is very weak and chimerical. Their strength on such occasions, is not so very speedily dissipated: The small light pains sink them; but in proportion as the pains become stronger, their strength arises; being never deficient, when there is no extraordinary and uncommon symptom; and we may reasonably be assured, that in a healthy, well formed woman, mere weakness never prevents a delivery.

Of the Consequences of Labour, or Child-birth.

§ 369. The most usual consequences of child-birth in the country, are; 1. An excessive hæmorrhage. 2. An inflammation of the womb. 3. A sudden suppression of the *lochia*, or usual discharges after delivery. And, 4. The fever and other accidents, resulting from the milk.

Excessive bleedings or floodings, should be treated according to the manner directed § 365: And if they are very excessive, folds of linen, which have been wrung out of a mixture of equal parts of water and vinegar, should be applied to the belly, the loins, and the thighs: These should be changed for fresh moist ones, as they dry; and should be omitted, as soon as the bleeding abates.

§ 370. The inflammation of the womb is discoverable by pains in all the lower parts of the belly; by a tension or tightness of the whole; by a sensible increase of pain upon touching it; a kind of red stain or spot, that mounts to the middle of the belly, as high as the navel; which spot, as the disease increases, turns black, and then is always a mortal symptom; by a very extraordinary degree of weakness; an amazing change of countenance; a light *delirium*, or raving; a continual fever, with a weak and hard pulse; sometimes incessant vomitings; a frequent hiccup; a moderate discharge of a reddish, stinking, sharp water; frequent urgings to go to stool; a burning kind of heat of urine; and sometime an entire suppression of it.

§ 371. This most dangerous and frequently mortal disease should be treated like inflammatory ones. After bleeding, frequent glysters of warm water must by no means

means be omitted; some should also be injected into the womb, and applied continually over the belly. The patient may also drink continually, either of simple barley-water, with a quarter of an ounce of nitre in every pot of it, or of almond-milk No. 4.

§ 372. The total suppression of the *lobia*, the discharges after labour, which proves a cause of the most violent disorders, should be treated exactly in the same manner: But if unhappily hot medicines have been given, in order to force them down, the case will very generally prove a most hopeless one.

§ 373. If the milk fever run very high, the barley ptilan directed § 371, and glysters, with a very light diet, consisting only of panada, or made of some other farinaceous substances, and very thin, generally remove it.

§ 374. Delicate infirm women, who have not all the requisite and necessary attendance they want, and such as from indigence are obliged to work too soon, are exposed to many accidents, which frequently arise from want of due perspiration, and an insufficient discharge of the *lobia*; and hence, the separation of the milk in their breasts being disturbed, there are milky congestions, or knots as it were, which are always very painful and troublesome, and especially when they are formed more inwardly. They often happen on the thighs, in which case the ptilan No. 58, is to be drank, and the poultices No. 59, must be applied. These two remedies gradually dissipate and remove the tumour, if that may be effected without suppuration. But if that proves impossible, and pus, or matter, is actually formed, a surgeon must open the abscess, and treat it like any other.

§ 375. Should the milk coagulate, or curdle as it were, in the breast, it is of the utmost importance immediately to attenuate or dissolve that thickness, which would otherwise degenerate into a hardness, and prove a *scirrbus*, and from a *scirrbus* in process of time a cancer, that most tormenting and cruel distemper.

This horrible evil may however be prevented by an application to these small tumours, as soon as ever they appear. For this purpose nothing is more effectual than the prescriptions No. 57, and 60; but under such menacing circumstances, it is always prudent to take the best advice as early as possible,

From the moment these hard tumours become exceedingly

sively and obstinately so, and yet without any pain, we should abstain from every application, all are injurious; and greasy, sharp, resinous and spirituous ones, speedily change the *scirrhus* into a cancer. Whenever it becomes manifestly such, all applications are also equally pernicious, except that of No. 60. Cancers have long been thought and found incurable; but within a few years past some have been cured by the remedy No. 57, which nevertheless is not infallible, though it should always be tried*.

§ 376. The nipples of women, who give milk, are often fretted or excoriated,* which proves severely painful to them. One of the best applications is the most simple ointment, being a mixture of oil and wax melted together, or the ointment No. 66. Should the complaint prove very obstinate, the nurse ought to be purged, which generally removes it.

* The use of hemlock, which has been tried at *Lyons*, by all who have cancerous patients, having been given in very large doses, has been attended with no effect there, that merited the serious attention of practitioners. Many were careful to obtain the extract from *Vienna*, and even to procure it from Dr. *Stork* himself. But now it appears to have had so little success, as to become entirely neglected.

In all the instances I have seen of the exhibition of this medicine, some small relief of the symptoms was generally obtained, which happy effect ceased however upon a further use of the remedy. But I do not remember to have met with a single instance of its effecting a perfect cure; though I am told that this has happened in some few of the many trials that have been made with it in this country. Notwithstanding it is a sufficient foundation for always exhibiting this medicine, that it sometimes succeeds.

C H A P. XXVII.

Medical Directions concerning Children.

*Of the first cause of their disorders, the Meconium.—
The second, the souring of their milk.—The danger of
giving them oil.—Disorders from their want of perspi-
ration, the means of keeping it up, and of washing them
in cold water.—The third cause, the cutting of their
teeth.—The fourth cause, worms.—Of convulsions.—
Methods necessary to make them strong and hardy, with
general directions about them.*

SECT. 377.

THE diseases of children, and every thing relating to their health, are objects which generally seem to have been too much neglected by physicians; and have been too long trusted to the conduct of the most improper persons for such a charge. At the same time it must be admitted their health is of no little importance; their preservation is as necessary as the continuance of the human race; and the application of the practice of physic to their disorders is susceptible to their nearer approaches to perfection, than is generally conceived. It seems to have even some advantage over that practice which regards grown persons; and it consists in this, that the diseases of children are more simple, and less frequently complicated than those of adults.

It may be said indeed, they cannot make themselves so well understood, and mere infants certainly not at all. This is true in fact to a certain degree, but not strictly true; for though they do not speak our language, they have one which we should endeavour to understand. Nay, every distemper may be said, in some sense, to have a language of its own, which an attentive physician will learn. He should therefore use his utmost care to understand that of infants, and avail himself of it, to increase the means of rendering them healthy and vigorous, and to cure them of the different distempers to which they are liable. I do not propose actually to compleat this task myself, in all that extent it may justly demand; but I shall set forth the principal causes of their distempers, and the general method of

of treating them. By this means I shall at least preserve them from some of the mischiefs which are too frequently done them; and the lessening such evils as ignorance, or erroneous practice occasions, is one of the most important purposes of the present work.

§ 378. Nearly all the children who die before they are one year, and even two years old, die *with* convulsions; people say they died of them, which is partly true, as it is in effect, the convulsions that have destroyed them. But then these very convulsions are the consequences, the effects of other diseases, which require the utmost attention of those, who are entrusted with the care and health of the little innocents, as an effectual opposition to these diseases, these morbid causes, is the only means of removing the convulsions. The four principal known causes are, the *Meconium*, the excrements contained in the body of the infant, at the birth; *Acidities*, or sharp and sour humours; the cutting of the teeth, and worms. I shall treat briefly of each.

Of the Meconium.

§ 379. The stomach and guts of the infant, at its entrance into the world, are filled with a black sort of matter, of a middling consistence, and very viscid or glutinous, which is called the *Meconium*. It is necessary this matter should be discharged before the infant sucks, since it would otherwise corrupt the milk, and, becoming extremely sharp itself, there would result from their mixture a double source of evils, to the destruction of the infant.

The evacuation of this excrement is procured; 1. By giving them no milk at all for the first 24 hours of their lives. 2. By making them drink during that time some water, to which a little sugar or honey must be added, which will delute this *meconium*, and promote the discharge of it by stool, and sometimes by vomiting.

To be more certain of expelling all this matter, they should take one ounce of compound syrup* of succory, which

* This method is useful, whenever the mother does not suckle her child. Art is then obliged to prove a kind of substitute to nature, though always a very imperfect one. But when a mother, attentive to her own true interest, as well as her

which should be diluted with a little water, drinking up this quantity within the space of four or five hours. This practice is a very beneficial one, and it is to be wished it was to become general. This syrup is greatly preferable to all others, given in such cases, and especially to oil of almonds.

Should the great weakness of the child seem to call for some nourishment, there would be no inconvenience in allowing a little biscuit well boiled in water, which is pretty commonly done, or a little very thin light panada.

Of Acidities, or sharp Humours.

§ 380. Notwithstanding the bodies of children have been properly emptied speedily after their birth, yet the milk very often turns sour in their stomachs, producing vomitings, violent cholics, convulsions, a looseness, and even terminating in death. There are but two purposes to be pursued in such cases, which are to carry off the sour or sharp humours, and to prevent the generation of more. The first of these intentions is best effected by the syrup of succory * just mentioned.

The generation of further acidities is prevented, by giving three doses daily, if the symptoms are violent, and but two, or even one only, if they are very moderate, of the powder No. 61, drinking after it balm tea, or a tea of lime-tree leaves.

§ 381. It has been a custom to load children with oil of almonds †, as soon as ever they are infested with gripes: But it is a pernicious custom, and attended with very dangerous consequences. It is very true that this oil some-

her infant's, and listening to the voice of nature and her duty, suckle it herself, these remedies seem hurtful, or at least useless. The mother should give her child the breast as soon as she can. The first milk, the *Colostrum*, or *Strippings*, as it is called in quadrupeds, which is very serous or watery, will be serviceable as a purgative; it will forward the expulsion of the *meconium*, prove gradually nourishing, and is better than biscuits, or panada, which (he thinks) are dangerous in the first days after the birth.

* Or, instead, we may use that very elegant syrup of violets.

† The *magnesia alba* will be more proper for children than these oils.

times

times immediately allays the gripes, by involving, or sheathing up, as it were, the acid humours, and somewhat blunting the sensibility of the nerves. But it proves only a palliative remedy, or assuaging for a time, which, far from removing, increases the cause, since it becomes sharp and rancid itself; whence the disorder speedily returns, and the more oil the infant takes, it is griped the more. I have cured some children of such disorders, without any other remedy, except abstaining from oil, which weakens their stomachs, whence their milk is less perfectly, and more slowly digested, and becomes more easily soured. Besides, this weakness of the stomach, which thus commences at that very early age, has sometimes an unhealthy influence on the constitution of the child, throughout the remainder of his life.

A free and open belly is beneficial to children; now it is certain that the oil very often binds them, in consequence of its diminishing the force and action of the bowels. There is scarcely any person, who cannot observe this inconvenience attending it; notwithstanding they all continue to advise and to give it, to obtain a very different purpose: But such is the power of prejudice in this case, and in so many others; people are so strongly prepossessed with a notion, that such a medicine must produce such an effect, that its never having produced it avails nothing with them, their prejudice still prevails; they ascribe its want of efficacy to the smallness of the doses; these are doubled then, and notwithstanding its bad effects are augmented, their obstinate blindness continues.

This abuse of the oil also disposes the child to knotty hard tumours, and at length often proves the first cause of some diseases of the skin, whose cure is extremely difficult.

Hence it is evident this oil should be used on such occasions but very seldom; and that it is always very injudicious to give it in cholics, which arise from sharp and sour humours in the stomach, or in the bowels.

§ 382. Infants are commonly most subject to such cholics during their earliest months, after which they abate, in proportion as their stomachs grow stronger. They may be relieved in the fit by glysters of a decoction of chamomile flowers, in which a bit of soap of the size of a hazel-nut is dissolved. A piece of flannel wrung out of a decoction of chamomile flowers, with the addition of
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some Venice treacle, and applied hot over the stomach and on the belly, is also very beneficial and relieving.

Children cannot always take glysters, the continuance of which inability might be dangerous to them; and every one is acquainted with the common method of substituting suppositories to them, whether they are formed of the smooth and supple stalks of vines, &c. of soap, or of honey boiled up to a proper consistence.

But one of the most certain means to prevent these cholics, which are owing to childrens not digesting their milk, is to move and exercise them as much as possible; having a due regard however to their tender time of life.

§ 383. Before I proceed to the third cause of the diseases of children, which is, the cutting of their teeth, I must take notice of the first care their birth immediately requires, that is the washing of them the first time, merely to cleanse, and afterwards to strengthen them.

Of washing Children.

§ 384. The whole body of an infant just born is covered with a gross humour, which is occasioned by the fluids, in which it was suspended in the womb. There is a necessity to cleanse it directly from this, for which nothing is so proper as a mixture of one third wine and two thirds water; wine alone would be dangerous. This washing may be repeated some days successively; but it is a bad custom to continue to wash them thus warm, the danger of which is augmented by adding some butter to the wine and water, which is done too often. If this gross humour, that covers the child, seems more thick and glutinous than ordinary, a decoction of chamomile flowers, with a little bit of soap, may be used to remove it. The regularity of perspiration is the great foundation of health; to procure this regularity the teguments, the skin, must be strengthened; but warm washing tends to weaken it. When it is of a proper strength, it always performs its functions; nor is perspiration disordered sensibly by the alteration of the weather. For this reason nothing should be omitted, that may fix it in this state; and to attain so important an advantage, children should be washed, some few days after their birth, with cold water, in the state it is brought from the spring.

For this purpose a sponge is employed, with which they
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begin, by washing first the face, the ears, the back part of the head (carefully avoiding the * *fontanelle*, or mould of the head) the neck, the loins, the trunk of the body, the thighs, legs and arms, and in short every spot. This method which has obtained for so many ages, and which is practised at present by many people, who prove very healthy, will appear shocking to several mothers; they would be afraid of killing their children by it; and would particularly fail of courage enough to endure the cries, which children often make, the first time they are washed: Yet, if their mothers truly love them, they cannot give a more substantial mark of their tenderness to them, than by subduing their fears and their repugnance on this important head.

Weakly infants † are those who have the greatest need of being washed: Such as are remarkably strong may be excused from it; and it seems scarcely credible (before a person has frequently seen the consequences of it) how greatly this method conduces to give, and to hasten on, their strength. I have had the pleasure to observe, since I first endeavoured to introduce the custom among us, that several of the most affectionate and most sensible mothers, have used it with the greatest success. The midwives, who have been witnesses of it; the nurses, and the servants of the children, whom they have washed, publish it abroad; and should the custom become as general, as every thing seems to promise it will, I am fully persuaded, that by preserving the lives of a great number of children, it will certainly contribute to check the progress of depopulation.

They should be washed very regularly every day in every season, and every sort of weather; and in the fine warm season they should be plunged into a large pail of water, into the basins around fountains, in a brook, a river or a lake.

* That part of the head where a pulsation may be very plainly felt, where the bones are less hard, and not as yet firmly joined with those about them,

† There is however a certain degree of weakness, which may very reasonably deter us from this washing; as when the infant manifestly wants heat, and needs some cordial and frequent frictions, to prevent its expiring from downright feebleness; in which circumstances washing must be hurtful to it.

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After a few days crying, they grow so well accustomed to this exercise, that it becomes one of their pleasures; so that they laugh all the time of their going through it.

The first benefit of this practice is, as I have already said, the keeping up their perspiration, and rendering them less obnoxious to the impressions of the air and weather: And it is also in consequence of this first benefit, that they are preserved from a great number of maladies, especially from knotty tumours, often called kernels; from obstructions; from diseases of the skin, and from convulsions, its general consequence being to insure them firm, and even robust health.

§ 385. But care should be taken not to prevent, or as it were to undo, the benefit this washing procures them, by the bad custom of keeping them too hot. There is not a more pernicious one than this, nor one that destroys more children. They should be accustomed to light cloathing by day, and light covering by night, to go with their heads very thinly covered, and not at all in the day time, and after their attaining the age of two years. They should avoid sleeping in chambers that are too hot, and should live in the open air, both in summer and winter, as much as possible. Children who have been kept too hot in such respects, are very often liable to colds; they are weakly, pale, languishing, bloated, and melancholy. They are subject to hard knotty swellings, a consumption, all sorts of languid disorders, and either die in their infancy, or only grow up into a miserable valetudinary life; while those who are washed or plunged into cold water, and habitually exposed to the open air, are just in the opposite circumstances.

§ 386. I must further add here, that infancy is not the only stage of life, in which cold bathing is advantageous. I have advised it with remarkable success to persons of every age, even to that of seventy: And there are two kinds of diseases, more frequent indeed in cities than in the country, in which cold baths succeed very greatly: that is, debility or weakness of the nerves, and when perspiration is disordered, when persons are fearful of every breath of air, liable to influxions or colds, feeble and languishing, the cold bath re-establishes perspiration, restores strength to the nerves, and by that means dispels all the disorders, which arise from these two causes, in the animal œconomy. They should be used before dinner.

ner. But in the same proportion that cold bathing is beneficial, the habitual use, or rather abuse, of warm bathing is pernicious; they dispose the persons addicted to them to the apoplexy, to the dropsy, to vapours, and to the hypochondriacal disease: And cities, in which they are too frequently used, become, in some measure, desolate from such distempers.

Of the cutting of the Teeth.

§ 387. Cutting of the teeth is often very tormenting to children, some dying under the severe symptoms attending it. If it proves very painful, we should during that period; 1. Keep their bellies open by glysters, consisting only of a decoction of mallows: but glysters are not necessary, if the child, as it sometimes happens then, has a purging.

2. Their ordinary quantity of food should be lessened for two reasons; first, because the stomach is then weaker than usual; and next, because a small fever sometimes accompanies the cutting.

3. Their usual quantity of drink should be increased a little; the best for them certainly is an infusion of the leaves or flowers of the lime or linden-tree, to which may be added a little milk.

4. Their gums should frequently be rubbed with a mixture of equal parts of honey, and mucilage of quince-seeds; and a root of march-mallows, or of liquorice, may be given them to chew.

It frequently happens, that, during dentition, or the time of their teething, children prove subject to knots or kernels.

Of Worms.

§ 388. The *meconium*, the acidity of the milk, and cutting of the teeth, are the three great causes of the diseases of children. There is also a fourth, worms, which is likewise often very pernicious to them; but which, nevertheless, is not, at least not near so much, a general cause of their disorders as it is generally supposed, when a child exceeding two years of age proves sick. There are a great variety of symptoms which dispose people to think a child has worms; though there is but one that demonstrates it, which

which is discharging them upwards or downwards. There is great difference among children too in this respect, some remaining healthy, though having several worms, and others being really sick with a few.

They prove hurtful; 1. By obstructing the guts, and compressing the neighbouring bowels by their size. 2. By sucking up the chyle intended to nourish the patient, and thus depriving him of his very substance as well as subsistence: And, 3. By irritating the guts and even * gnawing them.

§ 389. The symptoms which make it probable they are infested with worms, are slight, frequent, and irregular colicks; a great quantity of spittle running off while they are fasting; a disagreeable smell of their breath, of a particular kind, especially in the morning; a frequent itchiness of their noses, which makes them scratch or rub them often; a very irregular appetite, being sometimes voracious, and at other times having none at all; pains at the stomach and vomitings; sometimes a costive belly; but more frequently loose stools of indigested matter; the belly rather larger than ordinary, the rest of the body meagre; a thirst which no drink allays; and often great weakness, with some degree of melancholy. The countenance has generally an odd unhealthy look, and varies every quarter of an hour; the eyes often look dull, and are surrounded with a kind of livid circle: The white of the eye is sometimes visible while they sleep, their sleep being often attended with terrifying dreams or *deliriums*, and with continual startings, and grindings of their teeth. Some children find it impossible to be at rest for a single moment. Their urine is often whitish, I have seen it from some as white as milk. They are afflicted with palpitations, swoonings, convulsions, long and profound drowsiness; cold sweats, which come on suddenly; fevers which have the appearances of malignity; obscurities and even loss of sight and of speech, which continue for a considerable time; palsies either of their hands, their arms, or their legs, and numbnesses. Their gums are in a bad state, and as though they had been gnawed or corroded: They have often the hickup, a small and irregular pulse, ravings, and, what is one of the least doubtful symptoms,

* There have been several instances of the bowels being completely perforated by these animals. B.

frequently a small dry cough ; and not seldom a mucosity or sliminess in their stools : Sometimes very long and violent cholics, which terminate in an abscess on the outside of the belly, from whence worms issue.

§ 390. There are a great multitude of medicines against worms. The *grenette*, or worm-seed, which is one of the commonest, is a very good one. The prescription No. 62, is also a very successful one ; and the powder No. 14, is one of the best. Flour of brimstone, the juice of *nasturtium*, or cresses, acids, and honey-water have often been very serviceable ; but the first three I have mentioned, succeeded by a purge, are the best. No. 63 is a purging medicine, that the most averse and difficult children may easily take. But when, notwithstanding these medicines, the worms are not expelled, it is necessary to take advice of some person qualified to prescribe more efficacious ones. This is of considerable importance, because, notwithstanding a great proportion of children may probably have worms, and yet many of them continue in good health, there are, nevertheless, some who are really killed by worms, after having been cruelly tormented by them for several years.

A disposition to breed worms always shews the digestions are weak and imperfect ; for which reason children liable to worms should not be nourished with food difficult to digest. We should be particularly careful not to stuff them with oils, which, admitting such oils should immediately kill some of their worms, do yet increase that cause, which disposes them to generate others. A long continued use of filings of iron is the remedy, that most effectually destroys this disposition to generate worms.

Of Convulsions.

§ 391. I have already said, § 378, that the convulsions of children are almost constantly the effect of some other disease, and especially of some of the four I have mentioned. Some other, though less frequent causes, sometimes occasion them, and these may be reduced to the following.

The first of them is the corrupted humours, that often abound in their stomach and intestines ; and which, by their irritation, produce irregular motions throughout the whole system of the nerves, or at least through some parts
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of them ; whence these convulsions arise, which are merely involuntary motions of the muscles. These putrid humours are the consequence of too great a load of aliments, of unsound ones, or of such as the stomachs of children are incapable of digesting. These humours are also sometimes the effect of a mixture and confusion of different aliments, and of a bad distribution of their nourishment.

It may be known that the convulsions of a child are owing to this cause, by the circumstances that have preceded them, by a disgusted loathing stomach ; by a certain heaviness and load at it ; by a foul tongue ; a great belly ; by its bad complexion, and its disturbed unrefreshing sleep.

The child's proper diet, that is, a certain diminution of the quantity of its food ; some glysters of warm water, and the purge No. 63, very generally remove such convulsions.

§ 392. The second cause is the bad quality of their milk. Whether it be that the nurse has fallen into a violent passion, some considerable disgust, great fright, or frequent fear : Whether she has eat unwholesome food, drank too much wine, spirituous liquors, or any strong drink : Whether she is seized with a descent of her monthly discharges, and that has greatly disordered her health ; or, finally, whether she prove really sick ; in all these cases the milk is vitiated, and exposes the infant to violent symptoms, which sometimes speedily destroy it.

The remedies for convulsions, from this cause, consist ; 1. In letting the child abstain from this corrupted milk, until the nurse shall have recovered her state of health and tranquillity, the speedy attainment of which may be forwarded by a few glysters ; by gentle pacific medicines ; by an entire absence of whatever caused or conducted to her bad health ; and by drawing off all the milk that had been so vitiated.

2. In giving the child some glysters ; in making it drink plentifully of a light infusion of the lime-tree flowers * ;

in

* Lime-tree flowers have an agreeable flavour, which is communicated to water by infusion, and rises with it in distillation. These flowers may be gathered in most places in Bri-

in giving it no other nourishment for a day or two, except panada, and other light spoon-meat, without milk.

3. In purging the child (supposing what has been just directed to have been unavailable) with an ounce, or an ounce and a half, of compound Syrup of succory, or as much manna. These lenient gentle purges carry off the remainder of the corrupted milk, and remove the disorders occasioned by it.

§ 393. A third cause which also produces convulsions, is the feverish distempers which attack children, especially the small-pox and the measles; but in general, such convulsions require no other treatment, but that proper for the disorder, which has introduced them.

§ 394. It is evident from what has been said in the course of this chapter, and it deserves to be attended to, that convulsions are commonly a symptom attending some other distemper, rather than an original distemper themselves; that they depend on many different causes; that, from this consideration, there can be no general remedy for removing or checking them; and that the only means and medicines which are suitable in each case, are those, which are proper to oppose the particular cause producing them, and which I have already pointed out in treating of each cause.

The greater part of the pretended specifics, which are indiscriminately and ignorantly employed in all sorts of convulsions, are often useless, and still oftner prejudicial. Of this last sort and character are,

1. All sharp and hot medicines, spirituous liquors, oil of amber, other hot oils and essences, volatile salts, and such other medicines, as, by the violence of their action on the irritable organs of children, are likelier to produce convulsions, than to allay them.

2. Astringent medicines, which are highly pernicious, whenever the convulsions are caused by any sharp humour that ought to be discharged from the body by stool; or when such convulsions are the consequences of an effort of nature, in order to effect a *crisis*. And as they almost ever depend on one or the other of these causes, it follows that astringents can very rarely, if ever, be bene-

tain in the month of July. They are considered by Hoffman and several other writers, as a specific in all kinds of spasms and pains, and even sometimes in the epilepsy.

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ficial. Besides that, there is always some danger in giving them to children without a mature, a thorough consideration of their particular case and situation, as they often dispose them to obstructions.

3. The over early, and too considerable use of opiates, either not properly indicated, or continued too long, such as Venice-treacle, mithridate, syrup of poppies, (and it is very easy to run upon some of these shoals) are also attended with the most embarrassing events, in regard to convulsions; and it may be affirmed they are improper, for nine tenths of those they are advised to. It is true, they often produce an apparent ease and tranquillity for some minutes, and sometimes for some hours too; but the disorder returns even with greater violence for this suspension, because they have augmented all the causes producing it; they impair the stomach; they bind up the belly; they lessen the usual quantity of urine; and besides, by their abating the sensibility of the nerves, which ought to be considered as one of the chief centinels appointed by nature, for the discovery of any approaching danger, they dispose the patient insensibly to such infarctions and obstructions, as tend speedily to produce some violent and mortal event, or which generate a disposition to languid and tedious diseases: And I do again repeat it, that notwithstanding there are some cases, in which they are absolutely necessary, they ought in general to be employed with great precaution and prudence. To mention the principal indications for them in convulsive cases, they are proper,

1. When the convulsions still continue, after the original cause of them is removed.

2. When they are so very violent, as to threaten a great and very speedy danger of life; and when they prove an obstacle to the taking remedies calculated to extinguish their cause. And,

3. When the cause producing them is of such a nature, as is apt to yield to the force of anodynes; as when, for instance, they have been the immediate consequence of a fright.

§ 395. There is a very great difference in different children, in respect to their being more or less liable to convulsions. There are some, in whom very strong and irritating causes cannot excite them, not even excruciating gripes and colicks, the most painful cutting of

their teeth, violent fevers, the small-pox, measles, and though they are, as it were, continually corroded by worms, they have not the slightest tendency to be convulsed. On the other hand, some are so very obnoxious to convulsions or so easily *convulsible*, if that expression may be allowed, that they are very often seized with them from such very slight causes, that the most attentive consideration cannot investigate them. This sort of constitution, which is extremely dangerous, and exposes the unhappy subject of it either to a very speedy death, or to a very low and languid state of life, requires some peculiar considerations, the detail of which would be the more foreign to the design of this treatise, as they are pretty common in cities, but much less so in country-places. In general, cold bathing, and the powder No. 14, are serviceable in such circumstances.

General Directions with respect to Children.

§ 396. I shall conclude this chapter by such farther advice, as may contribute to give children a more vigorous constitution and temperament, and to preserve them from many disorders.

First then, we should be careful not to cram them too much, and to regulate both the quantity and the set time of their meals, which is a very practicable thing, even in the very earliest days of their life, when the woman who nurses them, will be careful to do it regularly. Perhaps indeed this is the very age, when such a regulation may be the most easily attempted and effected; because it is that stage, when the constant uniformity of their way of living should incline us to suppose, that what they have occasion for, is most constantly very much the same.

A child who has already attained to a few years, and who is surrendered up more to his own exercise and vivacity, feels other calls; his way of life is become a little more various and irregular, whence his appetite must prove so too. Hence it would be inconvenient to subject him over exactly to one certain rule, in the quantity of his nourishment, or the distance between his meals. The dissipation, or passing of his nutrition, being unequal, the occasions he has for repairing it cannot be precisely stated and regular. But with respect to very little children in arms, or on the lap, an uniformity in the first of these respects,

respects, the quantity of their food, very consistently conduces to a useful regularity with respect to the second, the times of feeding them. Sickness is probably the only circumstance, that can warrant any alteration in the order and intervals of their meals; and then this change should consist in a diminution of their usual quantity, notwithstanding a general and fatal conduct seems to establish the reverse; and this pernicious fashion authorises the nurses to cram these poor little creatures the more, in proportion as they have real need of less feeding. They conclude of course, that all their cries are the effects of hunger, and the moment an infant begins, then they immediately stop his mouth with his food; without once suspecting, that these wailings may be occasioned by the uneasiness which an overloaded stomach may have introduced; or by pains whose cause is neither removed nor mitigated, by making the children eat; though the mere action of eating may render them insensible to slight pains, for a few minutes; in the first place, by calling off their attention; and secondly, by hushing them to sleep, a common effect of feeding in children, being in fact a very general and constant one, and depending on the same causes which dispose so many grown persons to sleep after meals.

A detail of the many evils children are exposed to, by thus forcing too much food upon them, at the very time when their complaints are owing to causes very different from hunger, might appear incredible. They are, however, so numerous and certain, that I seriously wish sensible mothers would open their eyes to the consideration of this abuse, and resolve to put an end to it.

Those who overload them with victuals, in hopes of strengthening them, are extremely deceived; there being no one prejudice equally fatal to such a number of them. Whatever unnecessary aliment a child receives, weakens, instead of strengthening him. The stomach, when over-distended, suffers in its force and functions, and becomes less able to digest thoroughly. The excess of the food last received, impairs the concoction of the quantity that was really necessary, which, being badly digested, is so far from yielding any nourishment to the infant, that it weakens it, proves a source of diseases, and concurs to produce obstructions, rickets, the evil, flow fevers, a consumption, and death.

Another unhappy custom prevails, with regard to the diet of children, when they begin to receive any other food

food besides their nurse's milk, and that is, to give them such as exceeds the digestive power of their stomachs; and to indulge them in a mixture of such things in their meals, as are hurtful in themselves, and more particularly so, with regard to their feeble and delicate organs.

To justify this pernicious indulgence, they affirm it is necessary to accustom their stomachs to every kind of food; but this notion is highly absurd, since their stomachs should first be strengthened, in order to make them capable of digesting every sort of food, and crowding indigestible, or very difficultly digestible materials into it, is not the way to strengthen it. To make a foal sufficiently strong for future labour, he is exempted from any, till he is four years old, which enables him to submit to considerable work, without being the worse for it. But if, to inure him to fatigue, he should be accustomed, immediately from his birth, to submit to burdens above his strength, he could never prove any thing but an utter jade, incapable of real service. The application of this to the stomach of a child is very obvious.

I shall add another very important remark, and it is this, that the too early work to which the children of peasants are forced, becomes of real prejudice to the publick. Hence families themselves are less numerous, and the more children that are removed from their parents, while they are very young, those who are left are the more obliged to work, and very often even at hard labour, at an age when they should exercise themselves in the usual diversions and sports of children. Hence they wear out in a manner, before they attain the ordinary term of manhood; they never arrive at their utmost strength, nor reach their full stature; and it is too common to see a countenance with the look of twenty years, joined to a stature of twelve or thirteen. In fact, they often sink under the weight of such hard involuntary labour, and fall into a mortal degree of wasting and exhaustion.

§ 397. Secondly, which indeed is but a repetition of the advice I have already given, and upon which I cannot insist too much, they must be frequently washed or bathed in cold water.

§ 398. Thirdly, they should be moved about, and exercised as much as they can bear, after they are some weeks old: The earlier days of their tender lives seeming consecrated, by nature herself, to a nearly total repose,

pose, and to sleeping, which seems not to determine, until they have need of nourishment; So that, during this very tender time of life, too much agitation or exercise might be attended with mortal consequences. But as soon as their organs have attained a little more solidity and firmness, the more they are danced about (provided it is not done about their usual time of repose, which ought still to be very considerable) they are so much the better for it; and by increasing it gradually, they may be accustomed to a very quick movement, and at length very safely to such, as may be called hard and hearty exercise. That sort of motion they receive in go-carts, or other vehicles, particularly contrived for their use, is more beneficial to them, than what they have from their nurses arms, because they are in a better attitude in the former, and it heats them less in summer, which is a circumstance of no small importance to them; considerable heat and sweat disposing them to be rickety.

§ 399. Fourthly, They should be accustomed to breathe in the free open air, as much as possible.

If children have been unhappily less attended to than they ought, whence they are evidently feeble, thin, languid, obstructed, and liable to scirrhoties, (which constitute what is termed a rickety or consumptive state) these four directions duly observed retrieve them from that unhappy state; provided the execution of them has not been too long delayed.

§ 400. Fifthly, If they have any natural discharge of a humour by the skin, which is very common with them, or any eruption, such as tetter, white scurf, a rashe, or the like, care must be taken not to check or repel them, by any greasy or restraining applications. Not a year passes without numbers of children having been destroyed by imprudence, in this respect; while others have been reduced to a deplorable and weakly habit.

I have been a witness to the most unhappy consequences of external medicines applied for the rashe and white scurf, which however frightful they may appear, are never dangerous; provided nothing at all is applied to them, without the advice and consideration of a truly skilful person.

When such external disorders prove very obstinate, it is reasonable to suspect some fault or disagreement in the milk the child sucks; in which case it should immediately be

be discontinued, corrected, or changed. But I cannot enter here into a particular detail of all the treatment necessary in such cases.

C H A P. XXVIII.

*Directions with respect to drowned Persons *.*

S E C T. 401.

WHENEVER a person who has been drowned, has remained a quarter of an hour under water, there can be no considerable hopes of his recovery: The space of two or three minutes in such a situation being often sufficient to kill a man irrecoverably. Nevertheless, as several circumstances may happen to have continued life, in such an unfortunate situation, beyond the ordinary term, we should always endeavour to afford them the most effectual relief, and not give them up as irrecoverable too soon: Since it has often been known, that until the expiration of two, and sometimes even of three hours, such bodies have exhibited some apparent tokens of life.

Water has sometimes been found in the stomach of drowned persons; at other times none at all. Besides, the greatest quantity which has ever been found in it has not exceeded that, which may be drank without any inconvenience; whence we may conclude, the mere quantity was not mortal; neither is it very easy to conceive how drowned persons can swallow water. What really kills them is mere suffocation, or the interception of air, of the action of breathing, and the water which descends into the lungs, and which is determined there, by the ef-

* The misfortune of a young man drowned in bathing himself, at the beginning of the season, occasioned the publication of this chapter by itself, in June 1761. A few days after, the like misfortune happened to a labouring man; but he was happily taken out of the water sooner than the first (who had remained about half an hour under it) and he was recovered by observing part of the advice this chapter contains; of which chapter several bystanders had copies.—This note seems to be from the author himself.

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forts they necessarily, though involuntarily make, to draw breath, after they are under water; for there absolutely does not any water descend, either into the stomach or the lungs of bodies plunged into water, after they are dead; a circumstance which serves to establish a legal sentence and judgment, in some criminal cases and trials: This water intimately blending itself with the air in the lungs, forms a viciid inactive kind of froth, which entirely destroys the functions of the lungs; whence the miserable sufferer is not only suffocated, but the return of the blood from the head being also intercepted, the blood vessels of the brain are overcharged, and an apoplexy is combined with the suffocation. This second cause, that is, the descent of the water into the lungs, is far from being general, it having been evident from the dissection of several drowned bodies, that it really never had existed in them.

§ 402. The intention that should be pursued is, that of unloading the lungs and the brain, and of reviving the extinguished circulation. For which purpose we should,

1. Immediately strip the sufferer of all his wet cloaths; rub him strongly with dry coarse linen; put him as soon as possible into a well heated bed, and continue to rub him well a very considerable time together.

2. A strong and healthy person should force his own warm breath into the patient's lungs; and the smoak of tobacco, if some was at hand, by means of some pipe, channel, funnel, or the like, that may be introduced into the mouth. This air or fume being forcibly blown in, by stopping the sufferer's nostrils close at the same time, penetrates into the lungs, and there rarifies by its heat, that air which, blended with the water, composed the viciid fume or froth. Hence the air becomes disengaged from the water, recovers its spring, dilates the lungs, and, if there still remains within any principle of life, the circulation is renewed again that instant.

3. If a moderately expert surgeon is at hand, he must open the jugular vein, or any large vein in the neck, and let out ten or twelve ounces of blood. Such a bleeding is serviceable on many accounts: First, meerly as bleeding, it renews the circulation, which is the constant effect of bleeding, in such swoonings as arise from an intercepted or suffocated circulation. Secondly, it is that particular bleeding which most suddenly removes, in such cases,

cases, the infarction or obstruction of the head and lungs: And, thirdly, It is sometimes the only vessel whence blood will issue under such circumstances. The veins of the feet then afford none, and those of the arm seldom; but the jugulars almost constantly furnish it.

4. The fume of tobacco should be thrown up, as speedily and plentifully as possible, into the intestines by the fundament. There are very commodious contrivances devised for this purpose, but as they are not common, it may be effected by many speedy means. One, by which a woman's life was preserved, consisted only in introducing the small tube of a tobacco pipe well lighted up; the head or bowl of it was wrapped up in a paper, in which several holes were pricked, and through these the breath was strongly forced; at the fifth blast a considerable rumbling was heard in the woman's belly, she threw up a little water, and a moment afterwards came to her senses. Two pipes may be thus lighted, and applied with their bowls covered over; the extremity of one is to be introduced into the fundament, and the other may be blown through into the lungs.

Any other vapour may also be conveyed up, by introducing a *canula*, or any other pipe, with a bladder firmly fixed to it; this bladder is fastened at its other end to a large tin funnel, under which tobacco is to be lighted. This contrivance has succeeded with me upon other occasions, in which necessity compelled me to invent and apply it.

5. The strongest volatiles should be applied to the patient's nostrils. The powder of some strong dry herb should be blown up his nose, such as sage, rosemary, rue, mint, and especially marjoram, or very well dried tobacco; or even the fume, the smoke of these herbs. But all these means are most properly employed after bleeding, when they are most efficacious and certain.

6. As long as the patient shews no signs of life, he will be unable to swallow, and it is then useless, and even dangerous, to pour much liquid of any kind into his mouth, which could do nothing but keep up or increase suffocation. It is sufficient, in such circumstances, to instil a few drops of some irritating liquor, which might also be cordial and reviving. But as soon as ever he discovers any motion, he should take, within the space of one hour, five or six common spoonfuls of oxymel of squills diluted with

with warm water; or if that medicine was not to be had very speedily, a strong infusion of the blessed thistle, or *carduus benedictus*, of sage, or of camomile flowers sweetened with honey, might do instead of it: And supposing nothing else to be had, some warm water, with the addition of a little salt, should be given. Some persons are bold enough to recommend vomits in such cases, but they are not without their inconvenience; and it is not as a vomit that I recommend the oxymel of squills in them.

7. Notwithstanding the sick discover some tokens of life, we should not cease to continue our assistance, since they sometimes irrecoverably expire, after these first appearances of recovering. And,

Lastly, Though they should be manifestly re-animated, there sometimes remains an oppression, a coughing, and feverishness, which effectually constitute a disease; and then it becomes necessary sometimes to bleed them in the arms, to give them barley water plentifully, or elder-flower tea.

§ 403. Having thus pointed out such means as are necessary and truly effectual in such unfortunate accidents, I shall very briefly mention some others, which it is the general custom to use and apply in the first hurry.

1. These unhappy people are sometimes wrapped up in a sheep's, or a calf's, or a dog's skin, immediately flayed from the animal: These applications have sometimes indeed revived the heat of the drowned; but their operations are more slow, and less efficacious, than the heat of a well warmed bed, with the additional vapour of burnt sugar, and long continued frictions with hot flannels.

2. The method of rolling them in an empty hoghead is dangerous, and mispends a deal of important time.

3. That also of hanging them up by the feet is attended with danger, and ought to be wholly discontinued. The froth or foam, which is one of the causes of their death, is too thick and tough to discharge itself, in consequence of its own weight. Nevertheless, this is the only effect that can be expected from this custom of suspending them by the feet; which must also be hurtful, by its tending to increase the overfulness of the head and of the lungs.

§ 404. It is some years since a girl of eighteen years old was recovered (though it is unknown whether she remained under water only a little time or some hours)

who

who was motionless, frozen as it were insensible, with her eyes closed, her mouth wide open, a livid colour, a swollen visage, a tumor or bloating of the whole body, which was over-laden, as it were, or water-soaked. This miserable object was extended on a kind of bed of hot or very warm ashes, quickly heated in great kettles, and by laying her quite naked on these ashes, by covering her with others equally hot, by putting a bonnet round her head, with a stocking round her neck stuffed with the same, and heaping coverings over all this, at the end of half an hour her pulse returned, she recovered her speech, and cried out, *I freeze, I freeze*; a little cherry-brandy was given her, and then she remained buried, as it were, eight hours under the ashes, being taken out of them afterwards without any other complaint except that of great lassitude or weariness, which went entirely off the third day. This method was undoubtedly so effectual, that it well deserves imitation; but it should not make us inattentive to the others. Heated gravel or sand mixed with salt, or hot salt alone, would have been equally efficacious, and they have been found so.

At the very time of writing this, two young ducks, who were drowned, have been revived by a dry bath of hot ashes*. The heat of a dung-heap may also be beneficial; and I have just been informed, by a very creditable and sensible spectator of it, that it effectually contributed to restore life to a man, who had certainly remained six hours under water.

§ 405. I shall conclude these directions with an article printed in a little work at *Paris*, about twenty years since, by order of the king, to which, there is not the least doubt, but that any other sovereign will readily accede.

“ Notwithstanding the common people are very generally disposed to be compassionate, and may wish to give all assistance to drowned persons, it frequently happens they do not, only because they dare not; imagining they expose themselves by it to persecution. It is therefore necessary that they should know, and it cannot be too often repeated, in order to eradicate such a pernicious prejudice, that the magistrates have never

* By much the most effectual application is common salt, heated to a considerable degree.

“interposed to prevent people from trying every possible
“means to recover such unfortunate persons, as shall be
“drowned and taken out of the water. It is only in those
“cases, when the persons are known to be absolutely and
“irrecoverably dead, that justice renders it necessary to
“seize their bodies.”

C H A P. XXIX.

Of Substances stop'd between the mouth and the Stomach.

S E C T. 406.

THE food we take in descends from the mouth through a very strait passage or channel, called the *Oesophagus*, the gullet, which, going parallel with the spine or backbone, joins to, or terminates at, the stomach.

It happens sometimes that different bodies are stop'd in this channel, without being able either to descend or to return up again; whether this difficulty arises from their being too large, or whether it be owing to their having such angles or points, as by penetrating into, and adhering to the sides of this membranous canal, absolutely prevent the usual action and motion of it.

§ 407. Very dangerous symptoms arise from this stoppage, which are frequently attended with a most acute pain in the part; and at other times, with a very incommodious, rather than painful sensation; sometimes a very ineffectual commotion at, or rising of, the stomach, attended with great anguish; and if the stoppage be so circumstanced, that the *glottis* is closed, or the wind-pipe compressed, a dreadful suffocation is the consequence; the patient cannot breathe, the lungs are quite distended, and the blood being unable to return from the head, the countenance becomes red, then livid; the neck swells, the oppression increases, and the poor sufferer speedily dies.

When the patient's breathing is not stop'd, nor greatly oppressed; if the passage is not entirely blocked up, and he can swallow something, he lives very easily for a few days, and then his case becomes a particular disorder of the *oesophagus*, or gullet. But if the passage is absolutely closed, and the obstruction cannot be removed for many days, a terrible death is the consequence.

§ 408. The danger of such cases does not depend so much on the nature of the obstructing substance, as on its size, with regard to that of the passage of the part where it stops, and of the manner in which it forms the obstruction; and frequently the very food may occasion death, while substances less adapted to be swallowed are not attended with any violent consequences though swallowed.

A child of six days old swallowed a comfit or sugar plumb, which stuck in the passage, and instantly killed it.

A grown person perceived that a bit of mutton had stopped in the passage; not to alarm any body he rose from table; a moment afterwards, on looking where he might be gone, he was found dead. Another was choaked by a bit of cake; a third by a piece of the skin of a ham; and a fourth by an egg, which he swallowed whole in a bravado.

A child was killed by a chestnut swallowed whole. Another died suddenly, choaked (which is always the case when they die instantly after such accidents) by a pear which he had tossed up, and caught in his mouth. A woman was choaked with another pear. A piece of sinew continued eight days in the passage, so that it prevented the patient from getting down any thing else; at the expiration of that time it fell into the stomach, being loosened by its putridity: The patient notwithstanding died soon after, being killed by the inflammation, gangrene, and weakness it had occasioned. Unhappily there occur but too many instances of this sort, of which it is unnecessary to cite more.

§ 409. Whenever any substance is thus detained in the gullet, there are two ways of removing it; that is, either by extracting it, or pushing it down. The safest and most certain way is always to extract or draw it out, but this is not always the easiest, as the efforts made for this purpose greatly fatigue the patient, and are sometimes attended with grievous consequences; and yet if the occasion is extremely urging, it may be eligible to thrust it down, if that is easier, and if there is no danger from the obstructing body's reception into the stomach.

The substances which may be pushed down without danger, are all common nourishing ones, as bread, meat, cakes, fruits, pulse, morsels of tripe, and even skin of bacon. It is only very large morsels of particular aliments, that prove very difficult to digest; yet even such are rarely attended with any fatality.

§ 410. The substances we should endeavour to extract or draw out, though it be more painful and less easy than to push them down, are all those whose consequences might be highly dangerous, or even mortal, if swallowed. Such are all totally indigestible bodies, as cork, linen-rags, large fruit-stones, bones, wood, glass, stones, metals; and more especially if any further danger may be superadded to that of its indigestibility, from the shape, whether rough, sharp, pointed, or angular, of the substance swallowed. Wherefore we should chiefly endeavour to extract pins, needles, fish-bones, other pointed fragments of bones, bits of glass, scissars, rings, or buckles.

Nevertheless it has happened, that every one of these substances have at one time or another been swallowed, and the most usual consequences of them are violent pains of the stomach, and in the guts, inflammations, suppurations, abscesses, a slow fever, gangrene, the *miserere* or iliac passion, external abscesses, through which the bodies swallowed down have been discharged, and frequently, after a long train of maladies, a dreadful death.

§ 411. When such substances have not passed in too deep, we should endeavour to extract them with our fingers, which frequently succeeds. If they are lower, we should make use of nippers or a small forceps; of which surgeons are provided with different sorts. Those which some smoakers carry about them might be very convenient for such purposes; and in case of necessity they might be made very readily out of two bits of wood. But this attempt to extract rarely succeeds, if the substance has descended far into the *œsophagus*, or gullet, and if the substance be of a flexible nature, which exactly applies itself to and fills up the cavity or channel of it.

§ 412. If the fingers and the nippers fail, or cannot be duly applied, crotchets, a kind of hooks, must be employed.

These may be made at once with a pretty strong iron wire, crooked at the end. It must be introduced in the flat way, and for the better conducting of it, there should be another curve or hook at the end it is held by, to serve as a kind of handle to it, which has this further use, that it may be secured by a string tied to it; a circumstance not to be omitted in any instrument employed on such occasions, to avoid such ill accidents as have some times ensued, from these instruments slipping out of the opera-

tor's hold. After the crotchet has passed beyond and below the substance, that obstructs the passage, it is drawn up again, and hooks up with it and extracts that impediment to swallowing.

This crotchet is also very convenient, whenever a substance somewhat flexible, as a pin or a fish-bone stick, as it were, across the gullet: The crotchet in such cases seizing them about their middle part, crooks and thus disengages them; if they are very brittle substances, it serves to break them; and if any fragment still sticks within, some other means must be used to extract them.

§ 413. When the obstructing bodies are small, and only stop up part of the passage, and which may either easily elude the hook, or straiten it by the resistance, a kind of rings may be used, and made either solid or flexible.

The solid ones are made of iron wire, or of a string of very fine brass wire. For this purpose the wire is bent into a circle about the middle part of its length, the sides of which circle do not touch each other, but leave a ring, or hollow cavity, of about an inch diameter. Then the long unbent sides of the wire are brought near each other, the circular part or ring is introduced into the gullet, in order to be conducted about the obstructing body, and so to extract it. Very flexible rings may be made of wool, thread, silk, or small packthread, which may be waxed, for their greater strength and consistence. Then they are to be tied fast to a handle of iron-wire, or whale-bone, or any flexible wood; after which the ring is to be introduced to surround the obstructing substance, and to draw it out.

Several of these rings passed through one another are often made use of, the more certainly to lay hold of the obstructing body, which may be involved by one, if another should miss it. This sort of rings has one advantage, which is, that when the substance to be extracted is once laid hold of, it may then, by turning the handle, be retained so strongly in the ring thus twisted, as to be moved every way, which must be a considerable advantage in many such cases.

§ 414. A fourth material employed on these unhappy occasions is the sponge. Its property of swelling considerably, on being wet, is the foundation of its usefulness here.

If

If any substance is stop'd in the gullet, but without filling up the whole passage, a bit of sponge is introduced into that part that is unstopped, and beyond the substance. The sponge soon dilates, and grows larger in this moist situation, and indeed the enlargement of it may be forwarded, by making the patient swallow a few drops of water; and then drawing back the sponge by the handle it is fastened to, as it is now too large to return through the same cavity, by which it was conveyed in, it draws out the obstructing body with it, and thus unplugs, as it were, and opens the gullet.

As dry sponge may shrink or be contracted, this circumstance has proved the means of squeezing a pretty large piece of it into a very small space. It becomes greatly compressed by winding a string or tape very closely about it, which tape may be easily unwound, and withdrawn, after the sponge has been introduced. It may also be inclosed in a piece of whalebone, split into four sticks at one end, and which, being endued with a considerable spring, contracts upon the sponge.

The whalebone is so smoothed and accommodated, as not to wound, and is also to be safely tied to a strong thread, that after having disengaged the whalebone from it, the surgeon may also draw out the sponge at pleasure.

Sponge is also applied on these occasions in another manner. When there is no room to convey it into the gullet, because the obstructing substance ingrosses its whole cavity; and supposing it not hooked into the part, but solely detained by the straitness of the passage, a pretty large bit of sponge is to be introduced towards the gullet, and close to the obstructing substance: Thus applied, the sponge swells, and thence dilates that part of the passage that is above the substance. The sponge is then withdrawn a little, and but very little, and this substance being less pressed upon above than below, it sometimes happens, that the greater straitness and contraction of the lower part of the passage, than of its upper part, causes that substance to ascend; and as soon as this first loosening or disengagement of it has happened, the total disengagement of it easily follows.

§ 415. Finally, when all these methods prove unavailing, there remains one more, which is to make the patient vomit; but this can scarcely be of any service, but

when such obstructing bodies are simply engaged in, and not hooked or struck into the sides of the *œsophagus*: since under this latter circumstance vomiting might occasion further mischief.

If the patient can swallow, a vomiting may be excited with the prescription No. 8, or with No. 34, or 35. By this operation a bone was thrown out, which had stopped in the passage four and twenty hours.

When the patient cannot swallow, an attempt should be made to excite him to vomit by introducing into, and twirling about the feathery end of a quill in the bottom of the throat, which the feather however will not effect, if the obstructing body strongly compresses the whole circumference of the gullet, and then no other resource is left, but giving a glyster of tobacco. A certain person swallowed a large morsel of calf's lights, which stopped in the middle of the gullet, and exactly filled up the passage. A surgeon unsuccessfully attempted various methods to extract it; but another seeing how unavailable all of them were, and the patient's visage becoming black and swelled, his eyes ready to start, as it were, out of his head, and falling into frequent swoonings, attended with convulsions too, he caused a glyster of an ounce of tobacco bo'led to be thrown up; the consequence of which was a violent vomiting, which threw up the substance that was so very near killing him.

§ 416. A sixth method, which I believe has never hitherto been attempted, but which may prove very useful in many cases, when the substances in the passages are not too hard, and are very large, would be to fix a worm (used for withdrawing the charge of guns that have been loaded) fast to a flexible handle, with a waxed thread fastened to the handle, in order to withdraw it, if the handle slipped from the worm; and by this contrivance it might be very practicable, if the obstructing substance was not too deep in the passage of the gullet, to extract it.—It has been known that a thorn fastened in the throat, has been thrown out by laughing.

§ 417. In the circumstances mentioned § 409, when it is more easy and convenient to push the obstructing body downwards, it has been usual to make use of leeks, which may generally be had any where (but which indeed are very subject to break) or of a wax candle oiled, and but very little heated, so as to make it flexible, or of a piece of whale-

whalebone, or of iron wire, one extremity of which may be thickened and blunted in a minute with a little melted lead. Small sticks of some flexible wood may be as convenient for the same use, such as the birch-tree, the hazel, the ash, the willow, a flexible plummet, or a leaden ring. All these substances should be very smooth, that they may not give the least irritation; for which reason they are sometimes covered over with a thin bit of sheep's gut. Sometimes a sponge is fastened to one end of them, which, completely filling up the whole passage, pushes down whatever obstacle it meets with.

In such cases too, the patient may be prompted to attempt swallowing down large morsels of some un hurtful substance, such as a crust of bread, a small turnip, a lettuce-stalk, or a bullet, in hopes of their carrying down the obstructing cause with them. It must be acknowledged, however, that these afford but a feeble assistance, and if they are swallowed without being well secured to a thread, it may be apprehended they may even increase the obstruction by their own stoppage.

It has sometimes very happily, though rarely occurred, that those substances attempted to be detrued or thrust downwards, have stuck in the wax-candle, or the leek, and sprung up and out with them: But this has never happened except in the case of pointing substances.

§ 418. Should it be impossible to extract the bodies mentioned § 410, and all such as it must be dangerous to admit into the stomach, we must then prefer the least of two evils, and rather run the hazard of pushing them down, than suffer the patient to perish dreadfully in a few moments. And we ought to scruple this resolution the less, as a great many instances have demonstrated, that notwithstanding several bad consequences, and even a tormenting death, have often followed the swallowing of such hurtful or indigestible substances, yet at other times they have been attended with little or no disorder.

§ 419. One of these four events is always the case, after swallowing such things. They either, 1. Go off by stool; or, 2. They are not discharged, and kill the patient. Or else, 3. They are discharged, by urine; or, 4. Are visibly extruded to the skin. I shall give some instances of each of these events.

§ 420. When they are voided by stool, they are either voided soon after they have been swallowed, and that with-

out having occasioned scarce any troublesome symptom ; or the voiding of them has not happened till a long time after swallowing, and is preceded with very considerable pain. It has been seen, that a bone of the leg of a fowl, a peach stone, the cover of a small box of Venice-treacle, pins, needles, and coins of different sorts, have been voided within a few days after they had slipt down into the stomach, and that with little or no complaint. A small flute, or pipe also, four inches long, which occasioned acute pains for three days, has been happily voided afterwards, besides, knives, razors, and one shoe-buckle. I have seen, but a few days since, a child between two and three years old, who swallowed a nail above an inch long, the head of which was more than three tenths of an inch broad : It stopt a few moments about the neck, but descended while its friends were looking for me ; and was voided with a stool that night, without any bad consequence. And still more lately have I known the entire bone of a chicken's wing thus swallowed, which only occasioned a slight pain in the stomach for three or four days.

Sometimes such substances are retained within for a long time, not being voided till after several months, and even years, without the least ill effect ; and some of them have never either appeared, nor been complained of.

§ 421. But the event is not always so happy, and sometimes though they are discharged through the natural passages, the discharges have been preceded by very acute pains in the stomach, and in the bowels. A girl swallowed down some pins, which afflicted her with violent pains for the space of six years, at the expiration of which term she voided them and recovered. Three needles being swallowed brought on cholics, swoonings, and convulsions for a year after, and then being voided by stool, the patient recovered. Another person, who swallowed two, was much happier in suffering but six hours from them, when they were voided by stool, and he did well.

It sometimes happens, that such indigestible substances, after having passed all the meanders, the whole course of the intestines, have been stopt in the fundament, and brought on very troublesome symptoms ; but such, however, as an expert surgeon may generally remove. If it is practicable to cut them, as it is when they happen to be thin bones, the jaw bones of fish, or pins, they are then very easily extracted.

§ 422. The second event is, when these fatal substances are never voided, but cause very embarrassing symptoms, which finally kill the patient; and of these cases there have been but too many examples.

A young girl having swallowed some pins, which she held in her mouth, some of them were voided by stool; but others of them pricked and pierced into her guts, and even into the muscles of her belly, with the severest pain, and killed her at the end of three weeks.

A man swallowed a needle, which pierced through his stomach, and into his liver, and ended in a mortal consumption.

A plummet, which slid down while the throat of a patient was searching, killed him at the end of two years.

Very often different coins, and of different metals, have been swallowed without any fatal or troublesome effects, even to the amount of a hundred luidores have been swallowed, and all voided *. Nevertheless, these fortunate escapes ought not to make people too secure and incautious, since such melancholy consequences have happened as may very justly alarm them. One single piece of money that was swallowed, entirely obstructed the communication between the stomach and intestines, and killed the patient. Whole nuts have often been inadvertently swallowed: but there have been some instances of persons in whom a heap † of them has been formed, which proved the cause of death, after producing much pain and inquietude.

§ 423. The third issue or event is, when these substances, thus swallowed down, have been discharged by urine: But these cases are very rare.

A pin of a middling size has been discharged by urine, three days after it slid down; and a little bone has been expelled the same way, besides cherry-stones, plumb-stones, and even one peach-stone.

§ 424. Finally, the fourth consequence or event is,

* A man of the name of *Poole*, who being taken in the year 1717 or 18, by pirates, had swallowed four guineas, and a gold ring, all which he voided some days after without any injury or complaint, and thus saved them.

† Many fatal examples of this kind may be seen in the *Philosophical Transactions*, which should caution people against swallowing cherry-stones, and still more against these of prunes, or such as are pointed,

when the indigestible substances, thus swallowed, have pierced through the stomach or intestines, and even to the skin itself, and occasioned an abscess, have made an outlet for themselves, or have been taken out of the abscess. A long time is often required to effect this extraordinary trajection and appearance of them; sometimes the pains they occasion are continued; in other cases, the patient complains for a time, after which the pain ceases, and then returns again. The imposthume, or gathering, is formed in the stomach, or in some other part of the belly; and sometimes these very substances, after having pierced through the guts, make very singular routs, and are discharged very remotely from the belly. One needle that had been swallowed, found its way out, at the end of four years, through the leg, another at the shoulder.

§ 425. All these examples, and many others of cruel deaths, from swallowing noxious substances, demonstrate the great necessity of an habitual caution in this respect, and give in their testimony against the horrid, I had almost said the criminal imprudence, of people's amusing themselves with such tricks as may lead to such terrible accidents, or even holding any such substance in their mouths, as by slipping down, through imprudence or accident, may prove the occasion of their death. Is it possible, that any one, without shuddering, can hold pins or needles in their mouths, after reflecting on the dreadful accidents, and cruel deaths, that have thus been caused by them?

§ 426. It has been shewn already, that substances obstructing the passage of the gullet, sometimes suffocate the patient; that at other times they can neither be extracted nor thrust down, but that they stop in the passage, without killing the patient, at least not immediately and at once. This is the case when they are so circumstanced, as not to compress the *trachæa*, the wind-pipe, and not totally to prevent the swallowing of food, which last circumstance can scarcely happen, except the obstruction has been formed by angular or pointed bodies. The stoppage of such bodies is sometimes attended, and that without much violence, with a small suppuration, which loosens them; and then they are either returned upwards through the mouth, or descend into the stomach. But at other times, an extraordinary inflammation is produced, which kills the patient. Or if the contents of the abscess attending the

the inflammation tend outwardly, a tumour is formed on the external part of the neck, which is to be opened, and through whose orifice the obstructing body is discharged. In other instances again they take a different course, attended with little or no pain, and are at length discharged by a gathering behind the neck, on the breast, the shoulder, or various other parts.

§ 427. Some persons, astonished at the extraordinary course and progression of such substances, which, from their size, and especially from their shape, seem to them incapable of being introduced into, and, in some sort, circulating through the human body, without destroying it, are very desirous of having the rout and progression of such intruding substances explained to them. To gratify such inquirers, I may be indulged in a short digression, which perhaps is the less foreign to my plan; as in dissipating what seems marvellous, and has been thought supernatural in such cases, I may demolish that superstitious prejudice, which has often ascribed effects of this sort to witchcraft; but which admit of an easy explanation. This very reason is the motive that has determined me to give a further extent to this chapter.

Wherever an incision is made through the skin, a certain membrane appears, which consists of two coats or *laminae*, separated from each other by small cells or cavities, which all communicate together: and which are furnished, more or less, with fat. There is not any fat throughout the human body, which is not inclosed in, or enveloped with this coat, which is called the adipose, fatty, or cellular membrane.

This membrane is not only found under the skin, but further plying and insinuating itself in various manners, it is extended throughout the whole body. It distinguishes and separates all the muscles; it constitutes a part of the stomach, of the guts, of the bladder, and of all the *viscera* or bowels. It is this which forms what is called the Cawl, and which also furnishes a sheath or envelopement to the veins, arteries, and nerves. In some parts, it is very thick, and is abundantly replenished with fat; in others it is very thin and unprovided with any; but wherever it extends, it is wholly insensible, or void of all sensation and feeling.

It may be compared to a quilted coverlet, the cotton, or rather stuffing of which, is unequally distributed; greatly
abounding

abounding in some places, with none at all in others, so that in these, the stuff above and below touch each other. Within this membrane, or coverlet, as it were, such extraneous or foreign substances are moved about; and as there is a general communication throughout the whole extent of the membrane, it is no-way surprising, that they are moved from one part to another very distant, in a long course and duration of movement. Officers and soldiers very often experience, that bullets which do not pass through the parts where they have entered, are transferred to very different and remote ones.

The general communication throughout this membrane is daily demonstrated by facts, which the law prohibits; that is the butcher's inflating, or blowing up, the cellular membrane throughout the whole carcase of a calf, by a small incision in the skin, into which they introduce a pipe or the nozzle of a small bellows; and then, blowing forcibly, the air evidently puffs up the whole body of the calf into this artificial tumour or swelling.

Some very criminal impostors have availed themselves of this wicked contrivance, thus to bloat up children into a kind of monsters, which they afterwards expose to view for money.

In this cellular membrane, the extravasated waters of hydropic patients are commonly diffused; and here they give way to that motion, to which their own weight disposes them. But here I may be asked—As this membrane is crossed and intersected in different parts of it, by nerves, veins, arteries, &c. the wounding of which unavoidably occasions grievous symptoms, how comes it, that such do not ensue upon the intrusion of such noxious substances? To this I answer; 1. That such symptoms do sometimes really ensue: And, 3. That nevertheless they must happen but seldom, by reason that all the aforesaid parts, which traverse and intersect this membrane, being harder than the fat it contains; such foreign substances must almost necessarily, whenever they rencounter those parts, be turned aside towards the fat which surrounds them, whose resistance is very considerably less; and this the more certainly so, as these nerves, &c. are always of a cylindrical form.—But to return from this necessary digression.

§ 428. To all these methods and expedients I have already recommended on the important subject of this chapter, I shall further add some general directions.

1. It is often useful, and even necessary, to take a considerable quantity of blood from the arm; but especially if the patient's respiration, or breathing, is extremely oppressed; or when we cannot speedily succeed in our efforts to remove the obstructing substance; as the bleeding is adapted to prevent the inflammation, which the frequent irritations from such substances occasion, and as by its disposing the whole body into a state of relaxation, it might possibly procure an immediate discharge of the offending substance.

2. Whenever it is manifest that all endeavours, either to extract, or to push down the substance stopp'd in the passage, are ineffectual, they should be discontinued; because the inflammation occasioned by persisting in them, would be as dangerous as the obstruction itself; as there have been instances of people's dying in consequence of the inflammation; notwithstanding the body, which caused the obstruction, had been entirely removed.

3. While the means already advised are making use of, the patient should often swallow, or if he cannot, he should frequently receive by injection through a crooked tube or pipe, that may reach lower down than the *glottis*, some very emollient liquor, as warm water, either alone or mixed with milk, or a decoction of barley, of mallows, or of bran. A two-fold advantage may arise from this; the first is, that these softening liquors smooth and sooth the irritated parts; and secondly, an injection strongly thrown in, has often been more successful in loosening the obstructing body, than all attempts with instruments.

4. When after all we are obliged to leave this in the part, the patient must be treated as if he had an inflammatory disease; he must be bled, ordered to a regimen, and have his whole neck surrounded with emollient poultices. The like treatment must also be used, though the obstructing substance be removed; if there is room to suppose any inflammation left in the passage.

5. A proper degree of agitation has sometimes loosened the inhering body, more effectually than instruments. It has been experienced that a blow with the fist on the spine, the middle of the back, has often disengaged such obstructed and obstructing bodies; and I have known two instances of patients who had pins stopped in the passage; and, who getting on horseback to ride out in search of relief at a neighbouring village, found each of them the

pin

pin disengaged after an hour's riding: One spat it out, and the other swallowed it, without any ill consequence.

6. When there is an immediate dread of the patient's being suffocated; when bleeding him has been of no service; when all hope of freeing the passage in time is vanished, and death is seemingly at hand, if respiration be not restored, the operation of *bronchotomy*, or opening of the wind-pipe, must be presently performed; an operation neither difficult to a tolerably expert surgeon, nor very painful to the patient.

7. When the substance that was stopped passes into the stomach, the patient must immediately be put into a very gentle and smooth regimen. He should avoid all sharp, irritating, and inflaming food, wine, spirituous liquors, all strong drink, and coffee; taking but little nourishment at once, and no solids, without their having been very well chewed. The best diet would be that of farinaceous mealy soups, made of various leguminous grains, and of milk and water, which is much better than the common custom of swallowing different oils.

§ 429. The Author of Nature has provided, that in eating, nothing should pass by the *glottis* into the wind-pipe. This misfortune nevertheless does sometimes happen; at which very instant there ensues an incessant and violent cough, an acute pain, with suffocation; all the blood being forced up into the head, the patient is in great anguish, being agitated with violent and involuntary motions, and sometimes dying on the spot. A *Hungarian* grenadier, by trade a shoemaker, was eating and working at the same time. He tumbled at once from his seat, without uttering a single word. His companions called out for assistance; some surgeons speedily arrived, but after all their endeavours he discovered no sign of life. On opening the body, they found a lump, or large morsel of beef, weighing two ounces, forced into the windpipe, which it plugged up so exactly that not the least air could pass through it into the lungs.

§ 430. In a case thus circumstanced, the patient should be struck often on the middle of the back; some efforts to vomit should be excited, he should be prompted to sneeze with powder of lily of the valley, sage, or any cephalic snuffs, which should be blown strongly up his nose.

A pea, pitched into the mouth in playing, entered into the windpipe, and sprung out again by vomiting the patient

patient with oil. A little bone was brought up by making another sneeze with powdered lily of the valley.

In short, if all these methods of assisting, or saving the patient are evidently ineffectual, *bronchotomy* must be speedily performed. (See No. 6, of the preceding section.) By this operation, some bones, a bean, and a fish bone have been extracted, and the patient has been delivered from approaching death.

§ 431. All endeavours should be used when the preservation of human life is the object. In those cases, when an obstructing body can neither be disengaged from the throat, the passage to the stomach, nor be suffered to remain there without speedily killing the patient, it has been proposed to make an incision into this passage, the *œsophagus*, through which such a body is to be extracted; and to employ the like means, when a substance which had slipped even into the stomach itself was of a nature to excite such symptoms, as must speedily destroy the patient.

When the *œsophagus* is so fully and strongly closed, that the patient can receive no food by the mouth, he is to be nourished by glysters of soup, jelly, and the like.

C H A P. XXX.

Of external Disorders, and such as require chirurgical applications.

Of burns.—Of wounds.—Of bruises, and of falls.—Of ulcers.—Of frozen limbs, or joints.—Of chilblains.—Of ruptures.—Of phlegmons, or boils.—Of fellons, or whitlows.—Of thorns, splinters, &c. in the skin or flesh.—Of warts.—Of corns.

S E C T. 432.

HARD toiling countrymen are exposed, in the course of their daily work, to many outward accidents, such as cuts, contusions, &c. which very generally end happily, however considerable in themselves; and that principally in consequence of the pure and simple nature of their blood, which is frequently much less acrimonious, or sharp in the country, than in great towns or cities. Nevertheless,

vertheless, the very improper treatment of such accidents, in the country, frequently renders them, however light in themselves, very troublesome; and, indeed, I have seen so many instances of this, that I have thought it necessary to mark out here the proper treatment of such accidents, as may not necessarily require the hand or attendance of a surgeon. I shall also add somewhat very briefly, concerning external disorders, which at the same time result from an inward cause.

Of Burns.

§ 433. When a burn is very trifling and superficial, and occasions no vesication or blister, it is sufficient to clap a compress of several folds of soft linen upon it, dipped in cold water, and to renew it every quarter of an hour, till the pain is entirely removed. But when the burn has blistered, a compress of very fine linen, spread over with the pomatum No. 64, should be applied over it, and changed twice a day.

If the true skin is burnt, and even the muscles, the flesh under it, be injured, the same pomatum may be applied; but instead of a compress, it should be spread upon a pledget of soft lint, to be applied very exactly over it, and over the pledget again, a slip of the simple plaster No. 65, which every body may easily prepare; or, if they should prefer it, the plaster No. 66.

But, independently of these external applications, which are the most effectual ones, when they are directly to be had; whenever the burn has been very violent, is highly inflamed, and we are apprehensive of the progress and the consequences of the inflammation, the same means and remedies must be recurred to, which are used in violent inflammations: The patient should be bled, and, if it is necessary, it should be repeated more than once, and he should be put into a regimen; drink nothing but the ptisans No. 2, and 4, and receive daily two simple glysters.

If the ingredients for the ointment, called *nutritum*, are not at hand to make the pomatum No. 64, one part of wax should be melted in eight such parts of oil, to two ounces of which mixture the yolk of an egg should be added. A still more simple and sooner prepared application, is that of one egg, both the yolk and the white beat up with

with two common spoonfuls of the sweetest oil, without any rankness. When the pain of the burn, and all its other symptoms have very nearly disappeared, it is sufficient to apply the sparadrap, or oil-cloth, No. 66.

Of Wounds.

§ 434. If a wound has penetrated into any of the cavities, and has wounded any part contained in the breast, or in the belly : or if, without having entered into one of the cavities, it has opened some great blood vessel ; or if it has wounded a considerable nerve, which occasions symptoms much more violent, than would otherwise have happened ; if it has penetrated even to and injured the bone ; in short, if any great and severe symptoms supervene, there is an absolute necessity for calling in a surgeon. But whenever the wound is not attended with any of these circumstances ; when it affects only the skin, the fat membrane beneath it, the fleshy parts and the small vessels, it may be easily and simply dressed without such assistance ; since, in general, all that is truly necessary in such cases is, to defend the wound from the impressions of the air, and yet not so as to give any material obstruction to the discharge of the matter that is to issue from the wound.

§ 435. If the blood does not particularly flow out of any considerable vessel, but trickles almost equally from every spot of the wound, it may very safely be permitted to bleed, while some lint is speedily preparing. As soon as the lint is ready, so much of it may be introduced into the wound as will nearly fill it, without being forced in, which is highly improper, and would be attended with the same inconveniences as tents and dossils. It should be covered over with a compress dipped in sweet oil, or with the cerecloth No. 65 ; though I prefer the compress for the earliest dressings, and the whole dressing should be kept on with a bandage of two fingers breadth, and of a length proportioned to the size of the part it is to surround : This should be rolled on tight enough to secure the dressings, and yet so moderately, as to bring on no inflammation.

This bandage with these dressings are to remain on twenty-four or forty-eight hours ; wounds being healed the sooner, for being less frequently dressed. At the se-

cond dressing all the lint must be removed, which can be done with ease, and with reasonable speed, to the wounded; and if any of it should stick close, in consequence of the clogged and dried blood, it should be left behind, adding a little fresh lint to it; this dressing in other respects exactly resembling the first.

When, from the continuance of this simple dressing, the wound is become very superficial, it is sufficient to apply the cerecloth, or plaster, without any lint.

Such as have conceived an extraordinary opinion of any medical oils, impregnated with the virtues of particular plants, may, if that will increase their satisfaction, make use of the common oil of yarrow, of trefoil, of lilies, of chamomile, of balsamines, or of red roses; only being very careful, that such oils are not become stale and rank.

§ 436. When the wound is considerable, it must be expected to inflame before suppuration (which, in such a case, advances more slowly) can ensue, which inflammation will necessarily be attended with pain, with a fever, and sometimes with a raving, or wandering, too. In such a situation, a poultice of bread and milk, with the addition of a little oil, that it may not stick too close, must be applied instead of the compress or the plaster, which poultice is to be changed, but without uncovering the wound, thrice, and even four times every day.

§ 437. Should some pretty considerable blood-vessel be opened by the wound, there must be applied over it, a piece of agaric of the oak, No. 67, with which no country-place ought to be unprovided. It is to be kept on, by applying a good deal of lint over it, covering the whole with a thick compress, and then with a bandage a little tighter than usual. If this should not be sufficient to prevent the bleeding from the large vessel, and the wound be in the leg or arm, a strong ligature must be made above the wound with a *turniquot*, which is made in a moment with a skein of thread, or of hemp, that is passed round the arm circularly, into the middle of which is inserted a piece of wood or stick of an inch thickness, and four or five inches long; so that by turning round this piece of wood, any tightness or compression may be effected at pleasure; exactly as a country-man secures a hoghead, or a piece of timber of his cart, with a chain and ring. But care must be

be taken: 1. To dispose the skin in such a manner, that it must always be two inches wider than the part of it surrounds: And, 2. Not to strain it so tight as to bring on an inflammation, which might terminate in a gangrene.

§ 438. All the boasted virtues of a multitude of ointments are downright nonsense or quackery. Art, strictly considered, does not in the least contribute to the healing of wounds; the utmost we can do amounting only to our removing those accidents, which are so many obstacles to their re-union. On this account, if there is any extraneous body in the wound, such as iron, lead, wood, glass, bits of cloth or linen, they must be extracted, if that can be very easily done, but if not, application must be made to a good surgeon, who considers what measures are to be taken, and then dresses the wound, as I have already advised.

Very far from being useful, there are many ointments that are pernicious on these occasions, and the only cases in which they should be used, are those in which the wounds are distinguished with some particular appearances, which ought to be removed by particular applications; but a simple recent wound, in a healthy man, requires no other treatment but what I have already directed, besides that of the general regimen.

Spirituous applications are commonly hurtful, and can be suitable and proper but in a few cases, which physicians and surgeons only can distinguish.

When wounds occur in the head, instead of the compress dipped in oil, or of the cerecloth, the wound should be covered with a betony plaster; or, when none is to be had in time with a compress squeezed out of hot wine.

§ 439. As the following symptoms, of which we should be most apprehensive, are such as attend inflammations, the means we ought to have recourse to are those which are most likely to prevent them; such as bleeding, the usual regimen, moderate coolers and glysters.

Should the wound be very inconsiderable in its degree, and in its situation, it may be sufficient to avoid taking any thing heating, and above all things to retrench the use of any strong drink, and of flesh meat.

But when it is considerable, and an inflammation must be expected, there is a necessity for bleeding; the patient

should be kept in the most quiet and easy situation; he should be ordered immediately to a regimen, and sometimes the bleeding also must be repeated. Now all these means are the more indispensably necessary, when the wound has penetrated to some internal part, in which situation, no remedy is more certain than that of an extremely light diet. Such wounded persons as have been supposed incapable of living many hours, after wounds in the breast, in the belly, or in the kidneys, have been completely recovered, by living for the course of several weeks, on nothing but a barley, or other farinaceous, meally ptisans, without salt, without soup, without any medicine, and especially without the use of any ointments.

§ 440. In the same proportion that bleeding, moderately and judiciously employed, is serviceable, in that very same an excess of it becomes pernicious. Great wounds are generally attended with a considerable loss of blood, which has already exhausted the wounded person; and the fever is often a consequence of this copious loss of blood. Now if under such a circumstance, bleeding should be ordered and performed, the patient's strength is totally sunk; the humours stagnate and corrupt; a gangrene supervenes, and he dies miserably at the end of two or three days, of a *series* of repeated bleedings, but not of the wound. Notwithstanding the certainty of this, the surgeon frequently boasts of his ten, twelve, or even his fifteen bleedings; assuring his hearers of the insuperable mortality of the wound, since the letting out such a quantity of blood could not recover the patient; when it really was that excessive artificial profusion of it, that downright dispatched him.—The pleasures of love are very mortal ones to the wounded.

§ 441. The balsams and vulnerary plants, which have often been so highly celebrated for the cure of wounds, are very noxious, when taken inwardly; because the introduction of them gives or heightens the fever, which ought to have been abated.

Of Contusions, or Bruises.

§ 442. A contusion, which is commonly called a bruise, is the effect of the forcible impression or stroke of a substance not sharp or cutting, on the body of a man, or any animal; whether such an impression be violently made
on

on the man, as when he is struck by a stick, or by a stone thrown at him; or whether the man be involuntarily forced against a post, a stone, or any hard substance by a fall; or whether, in short, he is squeezed and oppressed betwixt two hard bodies, as when his finger is squeezed betwixt the door and the door-post, or the whole body jammed in betwixt any carriage and the wall. These bruises, however, are still more frequent in the country than wounds, and commonly more dangerous too; and indeed the more so, as we cannot judge so exactly, and so soon, of the whole injury that has been incurred, and because all that is immediately visible of it is often but a small part of the real damage attending it; since it frequently happens that no hurt appears for a few successive days; nor does it become manifest, until it is too late to admit of an effectual cure.

§ 443. It is but a few weeks since a cooper came to ask my advice; his manner of breathing, his aspect, the quickness, smallness, and irregularity of his pulse, made me apprehensive at once that some matter was formed within his breast; nevertheless he still kept up, and went about, working also at some part of his trade. He had fallen in removing some casks or hogsheds, and the whole weight of his body had been violently impressed upon the right side of his breast; notwithstanding this, he was sensible of no hurt at first; but some days afterwards he began to feel a dull heavy pain in that part, which continued and brought on a difficulty of breathing, weakness, broken sleep, and loss of appetite. I ordered him immediately to stillness and repose, and I advised him to drink a ptisan of barley sweetened with honey, in a plentiful quantity; he regularly obeyed only the latter part of my directions; yet on meeting him a few days after, he told me he was better. The very same week, however, I was informed he had been found dead in his bed. The imposthume had undoubtedly broke, and suffocated him.

§ 444. A young man, run away with by his horse, was forced with violence against a stable door, without being sensible of any damage at the time; but at the expiration of twelve days he found himself attacked by some such complaints as generally occur at the beginning of a fever. This fever was mistaken for a putrid one, and he was very improperly treated, for the fever it really was, above a month. In short, it was agreed at a consultation,

that matter was collected in the breast. In consequence of this he was more properly attended, and at length happily cured by the operation for an *empyema*, after languishing a whole year. I have published these two instances, to demonstrate the great danger of neglecting violent strokes or bruises, since the first of these patients might have escaped death, and the second a tedious and afflicting disorder, if they had taken immediately, after each accident, the necessary precautions against its consequences.

§ 445. Whenever any part is bruised, one of two things always ensues, and commonly both happen together, especially if the contusion is pretty considerable; either the small blood vessels of the contused part are broken, and the blood they contained is spread about in the adjoining parts; or else, without such an effusion of it, these vessels have lost their tone, their active force, and, no longer contributing to the circulation, their contents stagnate. In each of these cases, if nature, either without or with the assistance of art, does not remove the impediment, an inflammation comes on, attended with an imperfect unkindly suppuration, with putrefaction and a gangrene; not to mention the symptoms that arise from the contusion of some particular substance, as a nerve, a large vessel, a bone, &c. Hence we may also conceive the danger of a contusion happening to any inward part, from which the blood is either internally effused, or the circulation wholly obstructed in some vital organ; this is the cause of the sudden death of persons after a violent fall, or of those who have received the violent force of heavy descending bodies on their heads, or of some violent strokes, without any evident external hurt or mark.

There have been many instances of sudden deaths after one blow on the pit of the stomach, which has occasioned a rupture of the spleen.

It is, in consequence of falls occasioning a general slight contusion, as well internal as external, that they are sometimes attended with such grievous consequences, especially in old men, where nature, already enfeebled, is less able to redress such disorders. And thus, in fact, has it been that many such, who had before enjoyed a firm state of health, have immediately lost it after a fall (which seemed at first to have affected them little or not at all) and languished soon after to the moment of their death, which such accidents very generally accelerate.

§ 446. Different external and internal remedies are applicable in contusions. When the accident has occurred in a slight degree, and there has been no great nor general shock, which might produce an internal soreness or contusion, external applications may be sufficient. They should consist of such things as are adapted, first, to attenuate and resolve the effused and stagnant blood, which shews itself so apparently, and which, from its manifest blackness very soon after the contusion, becomes successively brown, yellow, and grey like, in proportion as the magnitude of the suffusion or settling decreases, till at last it disappears entirely, and the skin recovers its colour, without the blood's having been discharged thro' the external surface, as it has been insensibly and gradually dissolved, and been taken in again by the vessels: And, secondly, the medicines should be such as are qualified to restore the tone, and to recover the strength of the affected vessels.

The best application is vinegar, diluted, if very sharp, with twice as much warm water; in which mixture folds of linen are to be dipped, within which the contused parts are to be involved; and these folds are to be remoistened and reapplied every two hours on the first day.

Parsley, chervil, and house-leek leaves, lightly pounded, have also been successfully employed; and these applications are preferable to vinegar, when a wound is joined to the bruise. The poultices, No. 68, may also be used with advantage.

§ 447. It has been a common practice immediately to apply spirituous liquors, such as brandy, arquebussade, and * Alibour water, and the like; but a long abuse ought not to be established by prescription. These liquids, which coagulate the blood instead of resolving it, are truly pernicious; notwithstanding they are sometimes employed without any visible disadvantage on very slight occasions; frequently by determining the settled blood towards the interstices of the muscles, the fleshy parts; or sometimes even by preventing the effusion, or visible settling of the blood, and fixing it, as it were, within the bruised vessels, they seem to be well; though this only arises from their concentrating and concealing the evil, which

* This is a solution of white vitriol and some other drugs in spirit of wine.

at the end of a few months breaks forth again in a very troublesome shape; of this I have seen some miserable examples, whence it has been abundantly evinced, that applications of this sort should never be admitted, and that vinegar should be used instead of them. At the utmost it should only be allowed (after there is reason to suppose all the stagnant blood resolved and reformed into the circulation) to add a third part of arquebussade water to the vinegar, with an intention to restore some strength to the relaxed and weakened parts.

§ 448. It is still a more pernicious practice to apply in bruises, plasters composed of greasy substances, rosins, gums, earth, &c. The most boasted of these is always hurtful, and there have been many instances of very slight contusions being aggravated into gangrenes, by such plasters ignorantly applied; which bruises would have been entirely subdued by the œconomy of nature, if left to herself, in the space of four days.

Those sacs or suffusions of coagulated blood, which are visible under the skin, should never be opened, except for some urgent reason; since, however large they may be, they insensibly disappear and dissipate; instead of which termination, by opening them, they sometimes terminate in a dangerous ulceration.

§ 449. The internal treatment of contusions is exactly the same with that of wounds; only that in these cases the best drink is the prescription No. 1, to each pot of which a drachm of nitre must be added.

When any person has got a violent fall, has lost his senses, or is become very stupid; when the blood starts out of his nostrils, or his ears; when he is greatly oppressed, or his belly feels very tight and tense, which import an effusion of blood either into the head, the breast, or the belly, he must, first of all, be bled upon the spot, and all the means must be recurred to, which have been mentioned § 439, giving the wretched patient the least possible disturbance or motion, and by all means avoiding to jog or shake him, with a design to bring him to his senses, which would be directly and effectually killing him, by causing a further effusion of blood. Instead of this, the whole body should be fomented with some one of the decoctions already mentioned; and when the violence has been chiefly impressed on the head, wine and water should be preferred to vinegar.

Falls attended with wounds, and even a fracture of the skull, and with the most alarming symptoms, have been cured by these internal remedies, and without any other external assistance, except the use of the aromatic fomentation, No. 68.

A man from *Pully-petit* came to consult me, some months ago, concerning his father, who had a high fall out of a tree. He had been twenty-four hours without feeling or sense, and without any other motion than frequent efforts to vomit; and blood had issued both from his nose and ears. He had no visible outward hurt neither on his head, nor any other part: and, very fortunately for him, they had not as yet exerted the least effort to relieve him. I immediately directed a plentiful bleeding in the arm, and a large quantity of whey sweetened with honey to be drank, and to be also injected by way of glyster. This advice was very punctually observed; and fifteen days after the father came to *Lausanne*, which is four leagues from *Pully-petit*, and told me he was very well. It is proper in all considerable bruises, to open the patient's belly with a mild cooling purge, such as No. 11, 23, 32, 49. The prescription No. 24, and the honeyed whey, are excellent remedies, from the same reason.

§ 450. In these circumstances, wine, distilled spirits, and whatever has been supposed to revive, and to rouse, are mortal. For this reason people should not be too impatient, because the patients remain some time without sense or feeling. The giving of turpentine is more likely to do mischief than good; and if it has been sometimes serviceable, it must have been in consequence of its purging the patient, who probably then needed to be purged. The fat of a whale, (*sperma cæti*) dragon's blood, crab's eyes, and ointments of whatsoever sort are at least useless, and dangerous medicines, if the case be very hazardous; either by the mischief they do, or the good they prevent from being done. The proper indication is to dilute the blood, to render it more fluid and disposed to circulate; and the medicines just mentioned produce a very contrary effect.

§ 451. When an aged person gets a fall, which is the more dangerous in proportion to his age and grossness, notwithstanding he should not seem in the least incommoded by it, if he is sanguine and still somewhat vigorous, he should part with three or four ounces of blood. He should take immediately a few successive cups of a lightly aroma-

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tic drink, which should be given him hot; such, for instance, as an infusion of tea sweetened with honey, and he should be advised to move gently about. He must retrench a little from the usual quantity of his food, and accustom himself to very gentle, but very frequent exercise.

§ 452. Sprains or wrenches, which very often happen, produce a kind of contusion, in the parts adjoining to the sprained joint. This contusion is caused by the violent friction of the bone against the neighbouring parts; and as soon as the bones are immediately returned into their proper situation, the disorder should be treated as a contusion. Indeed if the bones should not of themselves return into their proper natural position, recourse must be had to the hand of a surgeon.

The best remedy in this case is absolute rest and repose, after applying a compress moistened in vinegar and water, which is to be renewed and continued, till the marks of the contusion entirely disappear, and there remains not the smallest apprehensions of an inflammation. Then indeed, and not before, a little brandy or arquebussade water may be added to the vinegar; and the part (which is almost constantly the foot) should be strengthened and secured for a considerable time with a bandage; as it might otherwise be liable to fresh sprains, which would daily more and more enfeeble it: for if this evil is overlooked too much in its infancy, the part never recovers its full strength; and a small swelling often remains to the end of the patient's life.

If the sprain is very slight and moderate, a plunging of the part into cold water is excellent; but if this is not done at once, immediately after the sprain, or if the contusion is violent, it is even hurtful.

The custom of rolling the naked foot upon some round body is insufficient, when the bones are not perfectly replaced; and hurtful, when the sprain is accompanied with a contusion.

It happens almost continually, that country people, who encounter such accidents, apply themselves either to ignorant or knavish impostors, who find, or are determined to find, a disorder or dislocation of the bones, where there is none; and who, by their violent manner of handling the parts, or by the plasters they surround them with, bring on a dangerous inflammation, and change the patient's dread of a small disorder, into a very grievous malady.

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These are the very persons who have created, or indeed rather imagined, some impossible diseases, such as the opening, the splitting of the stomach, and of the kidneys. But these big words terrify the poor country people, and dispose them to be more easily and effectually duped.

Of Ulcers.

§ 453. Whenever ulcers arise from a general fault of the blood, it is impossible to cure them, without destroying the cause and fuel of them. It is in fact imprudent to attempt to heal them up by outward remedies; and a real misfortune to the patient, if his assistant effectually heals and closes them.

But, for the greater part, ulcers in the country are the consequence of some wound, bruise, or tumour improperly treated; and especially of such as have been dressed with too sharp, or too spirituous applications. Rancid oils are also one of the causes, which change the most simple wounds into obstinate ulcers, for which reason they should be avoided; and apothecaries should be careful, when they compound greasy ointments, to make but little at a time, and the oftner, as a very considerable quantity of any of them becomes rank before it is all solid; notwithstanding sweet fresh oil may have been employed in preparing them.

§ 454. What serves to distinguish ulcers from wounds, is the dryness and hardness of the sides or borders of ulcers, and the quality of the humour discharged from them; which, instead of being ripe consistent matter, is a liquid more thin, less white, sometimes yielding a disagreeable scent, and so very sharp that if it touch the adjoining skin, it produces redness, inflammation, or pustules there; sometimes a serpiginous, or wring-worm like eruption, and even a further ulceration.

§ 455. Such ulcers as are of a long duration, which spread wide, and discharge much, prey upon the patient, and throw him into a slow fever, which melts and consumes him. Besides, when an ulcer is of a long standing, it is dangerous to dry it up; and indeed this never should be done, but by substituting in the place of one discharge that is become almost natural, some other evacuation, such as purging from time to time.

We may daily see sudden deaths, or very tormenting diseases,

diseases, ensue the sudden drying up such humours and drains as have been of a long continuance: And whenever any quack (and as many as promise the speedy cure of such deserves that title) assures the patient of his curing an inveterate ulcer in a few days, he demonstrates himself to be a very dangerous and ignorant intermeddler, who must kill the patient, if he keeps his word. Some of these impudent impostors make use of the most corrosive applications, and even arsenical ones; notwithstanding the most violent death is generally the consequence of them.

§ 456. The utmost that art can effect, with regard to ulcers which do not arise from any fault in the humours, is to change them into wounds. To this end, the hardness and dryness of the edges of the ulcer, and indeed of the whole ulcer, must be diminished, and its inflammation removed. But sometimes the hardness is so obstinate, that this cannot be molified any other way, than by scarifying the edges with a lancet. But when it may be effected by other means, let a pledget spread with the ointment, No. 69, be applied all over the ulcer, and this pledget be covered again with a compress of several folds, moistened in the liquid No. 70, which should be renewed three times daily; though it is sufficient to apply a fresh pledget only twice.

As I have already affirmed, that ulcers were often the consequence of sharp and spirituous dressings, it is evident, such should be abstained from, without which abstinence they will prove incurable.

To forward the cure, salted food, spices, and strong drink should be avoided; the quantity of flesh meat should be lessened; and the body be kept open by a regimen of pulse, or vegetables, and by the habitual use of whey sweetened with honey.

If the ulcers are in the legs, a very common situation of them, it is of great importance, as well as in wounds of the same parts, that the patients should walk about but little; and yet never stand up without walking. This indeed is one of these cases, in which those, who have some credit and influence in the estimation of the people, should omit nothing to make them thoroughly comprehend the necessity of confining themselves, some days, to undisturbed tranquillity and rest; and they should also convince them, that this term of rest is so far from being lost time, that it is likely to prove their most profitable time of

of life. Negligence, in this material point, changes the slightest wounds into ulcers, and the most trifling ulcers into obstinate and incurable ones: Inasmuch, that there is scarcely any man, who may not observe some family in his neighbourhood reduced to the hospital, from their having been too inattentive to the due care of some complaint of this sort.

I conclude this article on ulcers with repeating, that these which are owing to some internal cause, or even such as happen from an external one, in persons of a bad habit of body, frequently require a more particular treatment.

Of frozen Limbs.

§ 457. It is but too common, in very rigorous winters, for some persons to be pierced with so violent a degree of cold, that their hands or feet, or sometimes both together, are frozen at once, just like a piece of flesh-meat exposed to the air.

If a person thus pierced with the cold, disposes himself to walk about, which seems so natural and obvious an expedient to get warm; and especially, if he attempts to warm the parts that have been frozen, his case proves irrecoverable. Intolerable pains are the consequence, which pains are speedily attended with an incurable gangrene; and there is no means left to save the patient's life, but by cutting off the gangrened limbs.

There was a very late and terrible example of this, in the case of an inhabitant at *Cassonay*, who had both his hands frozen. Some greasy ointments were applied hot to them, the consequence of which was the necessity of cutting off six of his fingers.

§ 458. In short, there is but one certain remedy in such cases, and this is to convey the person affected into some place where it does not freeze, but where, however, it is but very moderately hot, and there continually to apply to the frozen parts snow, if it be at hand; and if not, to keep washing them incessantly, but very gently (since all friction would at this juncture prove dangerous) in ice-water, as the ice thaws in the chamber. By this application, the patients will be sensible of the feelings returning very gradually to the part, and that they begin to recover their motion. In this state they may safely be moved into a place a little warmer, and drink some cups of the potion No. 13, or of another of the like quality.

§ 459. Every person may be a competent judge of the manifest danger of attempting to relieve such parts by heating them, and of the use of ice-water, by common and daily experience. Frozen pears, apples, and radishes, being put into water just about to freeze, recover their former state, and prove quickly eatable. But if they are put into warm water, or into a hot place, rotteness, which is one sort of gangrene, is the immediate effect. The following case will make this right method of treating them still more intelligible, and demonstrate its efficacy.

A man was travelling to the distance of six leagues in very cold weather; the road being covered with snow and ice. His shoes, not being very good, failed him on his march, so that he walked the three last leagues bare-footed, and felt, immediately after the first half-league, sharp pains in his legs and feet, which increased as he proceeded. He arrived at his journey's end in a manner nearly deprived of his lower extremities. They set him before a great fire, heated a bed well, and put him into it. His pains immediately become intolerable: He was incessantly in the most violent agitations, and cried out in the most piercing and affecting manner. A physician, being sent for in the night, found his toes of a blackish colour, and beginning to lose their feeling. His legs and the upper part of his feet, which were excessively swelled, of a purplish red, and varied with spots of a violet colour, were still sensible of the most excruciating pains. The physician ordered in a pail of water from the adjoining river, adding more to it, and some ice-withal. In this he obliged the patient to plunge his legs; they were kept in near an hour, and within that time the pains became less violent. After another hour, he ordered a second cold bath, from whence the patient perceiving still further relief, prolonged it to the extent of two hours. During that time, some water was taken out of the pail, and some ice and snow were put into it. Now his toes, which had been black, grew red, the violet spots in his legs disappeared, the swelling abated, the pains became moderated, and intermitted. The bath was nevertheless repeated six times; after which there remained no other complaint, but that of a great tenderness or extraordinary sensibility in the soles of his feet, which hindered him from walking. The parts were afterwards bathed with some aromatic fomentations, and

and he drank a ptisan of sarsaparilla (one of elder-flowers, would have answered the same purpose, and have been less expensive.) On the eight day from his seizure, he was perfectly recovered, and returned home on foot on the fifteenth.

§ 460. When cold weather is extremely severe, and a person is exposed to it for a long time at once, it proves mortal in consequence of its congealing the blood, and because it forces too great a proportion of blood up to the brain; so that the patient dies of a kind of apoplexy, which is preceded by a sleepiness. In this circumstance, the traveller, who finds himself drowsy, should redouble his efforts to extricate himself from the imminent danger he is exposed to. This sleep, which he might consider as some alleviation of his sufferings, if indulged, would prove his last.

§ 461. The remedies in such cases are the same with those directed in frozen limbs. The patient must be conducted to an apartment rather cold than hot, and be rubbed with snow or with ice-water. There have been many well attested instances of this method; and as such cases are still more frequent in more northern climates, a bath of the very coldest water has been found the surest remedy.

Since it is known that many people have been revived, who had remained in the snow, or had been exposed to the freezing air during five, or even six successive days, and who had discovered no one mark of life for several hours, the utmost endeavours should be used for the recovery of persons in the like circumstances and situation.

Of Kibes, or Chilblains.

§ 462. These troublesome and smarting complaints attack the hands, feet, heels, ears, nose and lips, those of children especially, and mostly in winter; when these extremities are exposed to the sudden changes from hot to cold, and from cold to hot weather. They begin with an inflation or kind of swelling, which, at first, occasions but little heat, pain, or itching. Sometimes they do not exceed this first state, and go off spontaneously without any application: But at other times, (which may be termed the second degree of the disorder, whether it happens from their being neglected, or improperly treated) their heat, and redness, itching, and pain, increase considerably;

siderably ; so that the patient is often deprived of the free use of his fingers by the pain, swelling, and numbness : In which case the malady is still aggravated, if effectual means are not used.

Whenever the inflammation mounts to a still higher degree, small vesications or blisters are formed, which are not long without bursting ; when they leave a slight exco-riation, or rawness, as it were, which speedily ulcerates, and frequently proves a very deep and obstinate ulcer, discharging a sharp and ill-conditioned matter.

The last and most virulent degree of chilblains, which is not infrequent in the very coldest countries, though very rare in the temperate ones, is, when the inflammation degenerates into a gangrene.

§ 463. These tumours are owing to a fulness and obstruction of the vessels of the skin, which occurs from this circumstance, that the veins, which are more superficial than the arteries, being proportionably more affected and straitened by the cold, do not carry off all the blood communicated to them by the arteries ; and perhaps also the particles or atoms of cold, which are admitted through the pores of the skin, may act upon our fluids, as it does upon water, and occasion a congelation of them, or a considerable approach towards it.

If these complaints are chiefly felt, which in fact is the case, rather on the extreme parts than on others, it arises from two causes ; the principal one is, that the circulation's being weaker at the extremities than elsewhere, the effect of those causes that may impair it, must be more considerably felt there. The second reason is, because these parts are more exposed to the impressions from without than the others.

They occur most frequently to children, from their weakness and the greater tenderness and sensibility of their organs, which necessarily increases the effect of external impressions. It is the frequent and strong alteration from heat to cold, that seems to contribute the most powerfully to the production of chilblains ; and this effect of it is most considerable, when the heat of the air is at the same time blended with moisture ; whence the extreme and superficial parts pass suddenly as it were, out of a hot into a cold bath. A man sixty years of age, who never before was troubled with kibes, having worn, for some hours on a journey, a pair of furred gloves in which his hands sweated,

ed, felt them very tender, and found them swelled up with blood: As the common effect of the warm bath is to soften and relax, and to draw blood abundantly to the bathed parts, whence it renders them more sensible.

This man, I say, thus circumstanced, was at that age first attacked with chilblains, which proved extremely troublesome; and he was every succeeding winter as certainly infested with them, within half an hour after he left off his gloves, and was exposed to a very cold air.

It is for this reason, that several persons are never infested with chilblains, but when they use themselves to muffs, which are scarcely known in hot countries; nor are they very common among the more northern ones, in which the extraordinary changes from cold to heat are very rare and unusual.

Some people are subject to this troublesome complaint in the fall; while others have it only in the spring. The child of a labouring peasant, who has a hard skin, and one inured to all the impressions of the seasons and of the elements, is, and indeed necessarily must be, less liable to kibes, than the child of a rich citizen, whose skin is often cherished, at the expence of his constitution. But even among children of the same rank in life and circumstances, who seem pretty much of the same complexion, and live much in the same manner, whence they might of course be supposed equally liable to the same impressions, and to the like effects of them, there is, nevertheless, a very great difference with respect to their constitutional propensity to contract chilblains. Some are very cruelly tormented with them, from the setting in of autumn, to the very end of the spring: Others have either none at all, or have them but very slightly, and for a very short time. This difference undoubtedly arises from the different quality of their humours, and the texture of their whole surface, but particularly from that of the skin of their hands; though we very readily confess it is by no means easy to determine, with certainty and precision, in what this difference essentially consists.

Children of a sanguine complexion and delicate skin, are pretty generally subject to this disorder, which is often regarded much too slightly, though it is really severe enough to engage our attention more; since, even abstracted from the sharp pains which smart these unhappy children for several months, it sometimes gives them a fever,

hinders them from sleeping, and yet confines them to their bed, which is very prejudicial to their constitutions. It also breaks in upon the order of their different duties and employments; it interrupts their innocent salutary pleasures; and sometimes, when they are obliged to earn their daily bread by doing some work or other, it sinks them down to misery. I knew a young man who from being rendered incapable by chilblains, of serving out his apprenticeship to a watch-maker, is become a lazy beggar.

Chilblains which attack the nose, often leave a mark that alters the physiognomy, the aspect of the patient, for the remainder of his life: And the hands of such as have suffered from very obstinate ones, are commonly ever sensible of their consequences.

§ 464. With respect, therefore, to these afflicting tumours and ulcerations, we should, in the first place, do our utmost to prevent them; and next exert our best endeavours to cure such as we could not prevent.

§ 465. Since they manifestly depend on the sensibility of the skin, the nature of the humours, and the changes of the weather from heat to cold, in order to prevent them, in the first place, the skin must be rendered firmer or less tender. 2. That vicious quality of the temperament, which contributes to their existence, must be corrected. And, 3. The persons so liable must guard themselves, as well as possible, against these changes of the weather.

Now the skin of the hands, as well as that of the whole body, may be strengthened by that habit of washing or bathing in cold water, which I have described at large § 384; and in fact, I have never seen children, who had been early accustomed and inured to this habit, as much afflicted with chilblains as others. But still a more particular regard should be had to fortify the skin of the hands, which are more obnoxious to this disorder than the feet, by making children dip them in cold water, and keep them for some moments together in it every morning, and every evening too before supper, from the very beginning of the fall. It will give the children no sort of pain, during that season, to contract this habit; and when it is once contracted, it will give them no trouble to continue it throughout the winter, even when the water is ready to freeze every where. They may also be habituated to plunge their feet into cold water, twice or thrice a week:
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And this method, which might be less adapted for grown persons, who had not been accustomed to it, must be without objection with respect to such children as have been accustomed to it, to whom all its consequences must be useful and salutary.

At the same time, care must be taken not to defeat or lessen the effect of the cold bathing, by suffering the bather or washer to grow too warm between two baths or dipping; which is also avoiding the two speedy successions of heat and cold. For this purpose, 1. The children must be taught never to warm their hands before the fire at such times, and still less before the stoves, which very probably are one of the principal causes of chilblains, that are less usual in countries which use no such stoves, and among those individuals who make the least use of them where they are. Above all, the use of *cavettes* (that is, of seats or little stoves, as it were, contrived between the stove and the wall) is prejudicial to children; and even to grown people, upon several accounts. 2. They should never accustom themselves to wear muffs. 3. It would be also proper they should never use gloves, unless some particular circumstances require it; and I recommend this abstinence from gloves, especially to young boys: But if any should be allowed them, let the gloves be thin and smooth.

§ 466. When chilblains seem to be nourished by some fault in the temperament or humours, the consideration of a physician becomes necessary, to direct a proper method of removing or altering it. I have seen children from the age of three, to that of twelve or thirteen years, in whom their chilblains, raw and bleed, as it were, for eight months of the year, seemed to be a particular kind of issue, by which nature freed herself of an inconvenient superfluity of humours, when the perspiration was diminished by the abatement of the violent heats. In such cases I have been obliged to carry them through a pretty long course of regimen and remedies; which, however, being necessarily various from a variety of circumstances, cannot be detailed here. The milder preparations of antimony are often necessary in such cases; and some purges conduce in particular ones to allay and to abridge the disorder.

§ 467. The first degree of this complaint goes off, as I have already said, without the aid of medicine; or should it prove somewhat more obstinate, it may easily be dis-

pated by some of the following remedies. But when they rise to the second degree, they must be treated like other complaints from congelation, or frost-biting (of which they are the first degree) with cold water, ice water, and snow.

No other method or medicine is nearly as efficacious as very cold water, so as to be ready to freeze, in which the hands are to be dipped and retained for some minutes together, and several times daily. In short, it is the only remedy which ought to be applied, when the hands are the parts affected; when the patient has the courage to bear this degree of cold, and when he is under no circumstance which may render it prejudicial. It is the only application I have used for myself, after having been attacked with chilblains for some years past, from having accustomed myself to too warm a muff.

There ensues a slight degree of pain for some moments after plunging the hand into water, but it diminishes gradually. On taking the hand out, the fingers are numbed with the cold, but they presently grow warm again; and within a quarter of an hour, it is entirely over.

The hands, on being taken out of the water, are to be well dried, and put into skin gloves; after bathing three or four times, their swelling subsides, so that the skin wrinkles: But, by continuing the cold bathing it grows tight and smooth again; the cure is compleated after using it three or four days, and, in general, the disorder never returns again the same winter.

The most troublesome raging itching is certainly assuaged by plunging the hands into cold water.

The effect of snow is, perhaps, still more speedy: The hands are to be gently and often rubbed with it for a considerable time: They grow hot, and are of a very high red for some moments, but perfect ease very quickly succeeds.

Nevertheless, a very small number of persons, who must have extremely delicate and sensible skins, do not experience the efficacy of this application. It seems too active for them; it affects the skin much like a common blistering plaster; and by bringing on a large flow of humours there, it increases, instead of lessening the complaint.

§ 468. When this last reason, indeed, or some other circumstance exists; such as the child's want of courage,
or

or its affliction; the monthly discharges in a woman; a violent cough; habitual cholics; and some other maladies, which have been observed to be renewed or aggravated by the influence of cold at the extremities, do really forbid this very cold application, some others must be substituted.

One of the best is to wear, day and night, without ever putting it off, a glove made of some smooth skin, such as that of a dog; which seldom fails to extinguish the disorder in some days time.

When the feet are affected with chilblains, socks of the same skin should be worn; and the patient keep close to his bed for in some days.

§ 469. When the disorder is violent, the use of cold water prohibited, and the gloves just recommended have but a slow effect, the diseased parts should be gently fomented or moistened several times a day, with some decoction, rather more than warm; which, at the same time, should be dissolving and emollient. Such is that celebrated decoction of scrapings, the peel of radishes, whose efficacy is still further increased, by adding one sixth part of vinegar to the decoction.

Another decoction, of whose great efficacy I have been a witness, but which dyes the hands yellow for a few days, is the prescription No. 71. Many others may be made, of nearly the same virtues, with all the vulnerary herbs, and even with the *saltranc*.

Urine, which some boast of in these cases, from their having used it with success; and the mixture of urine and lime water, have the like virtues with the former decoctions*.

As soon as the hands affected are taken out of these decoctions, they must be defended from the air by gloves.

§ 470. Vapours or steams are often more efficacious than decoctions; whence instead of dipping the hands into these already mentioned, we may expose them to their vapours, with still more success. That of hot vinegar is one of the most powerful remedies; those of asphalt, or of turpentine, have frequently succeeded too. It may be needless to add, that the affected parts must be defended from the air, as well after the steams as the decoctions; since it is from this cause of keeping off the air, that the cerecloths are of service; and hence also the application of suet has sometimes answered.

* Chilblains may also be advantageously washed with water and flower of mustard, which will concur, in a certain and easy manner, both to cleanse and to cure them.

When the distemper is subdued by the use of bathings or steams, which make the skin supple and soft, then it should be strengthened by washing the parts with a little camphorated brandy, diluted with an equal quantity of water.

§ 471. When the nose is affected with a chilblain, the steam of vinegar, and an artificial nose, or covering for it, made of dog skin, are the most effectual applications. The same treatment is equally proper for the ears and the chin, when infested with them. Frequently washing these parts in cold water is a good preservative from their being attacked.

§ 472. Whenever the inflammation rises very high, and brings on some degree of fever, the patient's usual quantity of strong drink and of flesh-meat must be lessened; his body should be kept open by a few glysters; he should take every evening a dose of nitre as prescribed, No. 20; and if the fever prove strong, he should lose some blood too.

As many as are troubled with obstinate chilblains, should always be denied the use of strong liquor and flesh.

§ 473. When this distemper prevails in its third degree, and the parts are ulcerated, besides keeping the patients strictly to the regimen of persons in a way of recovery, and giving them a purge of manna, the swelled parts should be exposed to the steams of vinegar; the ulcerations should be covered with a diapalma plaster; and the whole part should be enveloped in a smooth soft skin, or in thin cerecloths.

§ 474. The fourth degree of this disease in which the parts become gangrenous, must be prevented by the method and medicines which remove an inflammation; but if unhappily a gangrene has already appeared, the assistance of a surgeon proves indispensably necessary.

Of Ruptures.

§ 475. *Hernias*, or ruptures, which country-people term *being bursten*, are a disorder which sometimes occurs at the very birth; though more frequently they are the effects of violent crying, of a strong forcing cough, or of repeated efforts to vomit, in the first months of infancy.

They may happen afterwards indiscriminately, at every age, either as consequences of particular maladies, or accidents,

accidents, or from peoples violent exertions of their strength. They happen much oftener to men than women; and the most common sort, indeed the only one of which I propose to treat, and that but briefly, is that which consists in the descent of a part of the guts, or of the cawl, into the bag or cod-piece.

It is not difficult to distinguish this rupture. When it occurs in little children, it is almost ever cured by making them constantly wear a bandage, which should be made only of fustian, with a little pillow or pincushion, stuffed with linen-rags, hair, or bran. There should be at least two of these bandages, to change them alternately; nor should it ever be applied, but when the child is laid down on its back, and after being well assured that the gut or cawl, which had fallen down, has been safely returned into the cavity of the belly; since without this precaution it might occasion the worst consequences.

The good effect of the bandage may be still further promoted by applying upon the skin and within the plate or fold of the groin (under which place the rings, or passage out of the belly into the bag lie) some pretty astringent or strengthening plaster, such as that commonly used for fractures, or that I have already mentioned § 144. Here we may observe by the way, that ruptured children should never be set on a horse, nor be carried by any person on horseback, before the rupture is perfectly cured.

§ 476. In a more advanced age, a bandage only of fustian is not sufficient; one must be procured with a plate of steel, even so as to constrain and incommode the wearer a little at first; nevertheless, it soon becomes habitual, and is then no longer inconvenient to them.

§ 477. Ruptures sometimes attain a monstrous size: and a great part of the guts fall down into the *scrotum* or bag, without any symptom of an actual disease. This circumstance, nevertheless, is accompanied with very great inconvenience, which disables persons affected with it to work; and whenever the malady is so considerable, and of a long standing too, there are commonly some obstacles that prevent a compleat return of the guts into the belly. In this state indeed, the application of the bandage or truss is impracticable, and the miserable patients are condemned to carry their grievous burden for the remainder of their lives; which may, however, be palliated a little by the use of a suspensory and bag, adapted to the size of the rupture.

ture. This dread of its increasing magnitude is a strong motive for checking the progress of it when it first appears. But there is another still longer, which is, that ruptures expose the patient to a symptom frequently mortal. This occurs when that part of the intestines fallen into the *scrotum* inflames; when still increasing in its bulk and being extremely compressed, acute pains come on: For now, from the increase of the ruptures extent, the passage which gave way to its descent, cannot admit of its return or ascent; the blood-vessels themselves being oppressed, the inflammation increases every moment; the communication between the stomach and the fundament is often entirely cut off; so that nothing passes through, but incessant vomitings come on (this being the kind of *misere-re*, or Iliac passion I have mentioned, § 320) which are succeeded by the hickup, raving, swooning, cold sweats, and death.

§ 478. This symptom supervenes in ruptures, when the excrements become hard in that part of the guts fallen into the *scrotum*; when the patient is overheated with wine, drams, or inflammatory diet, &c. or when he has received a stroke on the ailing part, or had a fall.

§ 479. The best means and remedies are, 1st, As soon as ever this symptom or accident appears, to bleed the patient very plentifully, as he lies down in his bed, and upon his back, with his head a little raised, and his legs somewhat bent, so that his knees may be erect. This is the attitude or posture they should always preserve as much as possible. When the malady is not too far advanced, the first bleeding often makes a compleat cure; and the guts return up as soon as it is over. At other times this bleeding is less successful, and leaves a necessity for its repetition.

2. A glyster must be thrown up consisting of a strong decoction of the large white beet leaves, with a small spoonful or pinch of common salt, and a bit of fresh butter of the size of an egg.

3. Folds of linen dipt in ice water must be applied all over the tumour, and constantly renewed every quarter of an hour. This remedy, when immediately applied, has produced the most happy effects; but if the symptom has endured violently more than ten or twelve hours, it is often too late to apply it; and then it is better to make use of flannels dipt in a warm decoction of mallow and elder-

elder-flowers, shifting them frequently. It has been known however, that ice-water, or ice itself, has succeeded as late as the third day *.

4. When these endeavours are insufficient, glysters of tobacco smoke must be tried, which have often redressed and returned ruptures, when every thing else had failed.

5. And lastly, if all these attempts are fruitless, the operation must be resolved on, without losing a moment's time; as this local disease proves sometimes mortal in the space of two days; but for this operation an excellent surgeon is indispensably necessary. The happy consequence with which I have ordered it, in a most desperate cause, since the first edition of this work, on the sixth day after a labour, has convinced me, still more than any former observation I had made, that the trial of it ought never to be omitted, when other attempts have been unavailing. It cannot even hasten the patient's death, which must be inevitable without it, but it rather renders that more gentle, where it might fail to prevent it. When it is performed as Mr. LEVADE effected it, in the case I have just referred to, the pain attending it is very tolerable and soon over.

I shall not attempt to describe the operation, as I could not explain myself sufficiently to instruct an ignorant surgeon in it; and an excellent and experienced one must be sufficiently apprized of all I could say concerning it.

A certain woman in this place, but now dead, had the great and impudent temerity to attempt this operation, and killed her patients after the most excruciating torments and an extirpation, or cutting away of the testicle, which quacks and ignorant surgeons always do, but which a good surgeon never does in this operation. This is often the custom too (in country places) of those caitiffs, who per-

* Pieces of ice applied between two pieces of linen, directly upon the rupture, as soon as possible after its first appearance, is one of those extraordinary remedies, which we should never hesitate to make immediate use of. We may be certain by this application, if the rupture is simple, and not complicated by some aggravating cause, to remove speedily, and with very little pain, a disorder that might be attended with the most dreadful consequences. But the continuance of this application must be proportioned to the strength of the person ruptured, which may be sufficiently estimated by the pulse. E. L.

form this operation without the least necessity; and mercilessly emasculate a multitude of infants; whom nature, if left to her own conduct, or assisted only by a simple bandage, would have perfectly cured; instead of which, they absolutely kill a great many, and deprive those of their virility, who survive their robbery and violence. It were religiously to be wished, such castriffs were to be duly, that is severely punished; and it cannot be too much inculcated into the people, that this operation (termed the *bubonocoele*) in the manner it is performed by the best surgeons, is not necessary; except in the symptoms and circumstances I have mentioned, and that the cutting off the testicle never is so.

Of Pblegmons or Boils.

§ 480. Every person knows what boils are at sight, which are considerably painful when large, highly inflamed, or so situated as to incommode the motions, or different positions of the body. Whenever their inflammation is very considerable, when there are a great many of them at once, and they prevent the patients from sleeping, it becomes necessary to enter them into a cooling regimen, to throw up some opening glysters, and to make them drink plentifully of the ptisan No. 2. Sometimes it is also necessary to bleed the patient.

Should the inflammation be very high, indeed, a poultice of bread and milk, or of sorrel a little boiled and bruised, must be applied to it. But if the inflammation is only moderate, a mucilage plaster, or one of the simple diachylon, may be sufficient. Diachylon with the gums is more active and efficacious; but it so greatly augments the pain of some persons afflicted with boils, that they cannot bear it.

Boils, which often return, signify some fault in the temperament, and frequently one so considerable, that might dispose a physician to be so far apprehensive of its consequences, as to enquire into the cause, and to attempt the extinction of it. But the detail of this is no part nor purpose of the present work.

§ 481. The phlegmon, or boil, commonly terminates in suppuration, but a suppuration of a singular kind. It breaks open at first on its top, or the most pointed part, when some drops of a *pus* like that of an abscess come out,
after

after which the germ, or what is called the core of it, may be discerned. This is a purulent matter or substance, but so thick and tenacious, that it appears like a solid body; which may be drawn out entirely in the shape of a small cylinder, like the pith of elder, to the length of some lines of an inch, sometimes to the length of a full inch, and even more. The emission of this core is commonly followed by the discharge of a certain quantity, according to the size of the tumour, of liquid matter, spread throughout the bottom of it. As soon as ever this discharge is made, the pain goes entirely off, and the swelling disappears at the end of a few days, by continuing to apply the simple diachylon, or the ointment No. 66.

Of Fellony, or Whitlow.

§ 482. The danger of these small tumours is much greater than is generally supposed. It is an inflammation at the extremity or end of a finger, which is often the effect of a small quantity of humour extravasated, or stagnant, in that part; whether this has happened in consequence of a bruise, a sting, or a bite. At other times, it is evident, that it has resulted from no external cause, but is the effect of some inward one.

It is distinguished into many kinds, according to the place in which the inflammation begins; but the essential nature of the malady is always the same, and requires the same sort of remedies. Hence such as are neither physicians nor surgeons, may spare themselves the trouble of enquiring into the divisions of this distemper; which, though they vary the danger of it, and diversify the manner of the surgeon's operation, yet have no relation to the general treatment of it; the power and activity of which must be regulated by the violence of the symptoms.

§ 483. This disorder begins with a slow heavy pain, attended by a slight pulsation, without swelling, without redness, and without heat; but in a little time, the pain, heat, and pulsation or throbbing becomes intolerable. The part grows very large and red; the adjoining fingers and the whole hand swelling up. In some cases a kind of red and inflated fuse or streak may be observed, which beginning at the affected part, is continued almost to the elbow; neither is it unusual for the patients to complain of a very sharp pain under the shoulder; and sometimes

times the whole arm is excessively inflamed and swelled. The sick have not a wink of sleep, the fever and other symptoms quickly increasing. Indeed, if the distemper rises to a violent degree, a *delirium* and convulsions supervene.

This inflammation of the finger determines, either in suppuration, or in a gangrene. When the last of these occurs, the patient is in very great danger, if he is not very speedily relieved; and it has proved necessary more than once to cut off the arm, for the preservation of his life. When suppuration is effected, if the matter lies very deep and is sharp, or if the assistance of a surgeon has arrived too late, the bone of the last *phalanx*, or row of bones of the finger, is generally carious and lost. But how gentle soever the complaint has been, the nail is very generally separated, and falls off.

§ 484. The internal treatment in whitlows, is the same with that in other inflammatory distempers. The patient must enter upon a regimen more or less strict, in proportion to the degree of the fever; and if this runs very high, and the inflammation be very considerable, there may be a necessity for several bleedings.

The external treatment consists in allaying the inflammation; in softening the skin; and in procuring a discharge of the matter, as soon as it is formed. For this purpose,

1. The finger affected is to be plunged, as soon as the disorder is manifest, in water a little more than warm: The steam of boiling water may also be admitted into it; and by doing these things almost constantly for the first day, a total dissipation of the malady has often been obtained. But unhappily it has been generally supposed that such slight attacks could have but very slight consequences, whence they have been neglected until the disorder has greatly advanced; in which state, suppuration becomes absolutely necessary.

2. This suppuration, therefore, may be forwarded, by continually involving the finger, as it were, in a decoction of mallow-flowers boiled in milk, or with a cataplasm of bread and milk. This may be rendered still more active and ripening, by adding a few white lily roots, or a little honey. But this last must not be applied before the inflammation is somewhat abated, and suppuration begins; before which term, all sharp applications are very dangerous.

gerous. At this time yeast or leven may be advantageously used, which powerfully promotes suppuration. The sorrel poultice, mentioned § 480, is also a very efficacious one.

§ 485. A speedy discharge of the ripe matter is of considerable importance, but this particularly requires the attention of the surgeon as it is not proper to wait till the tumour breaks and discharges of itself; and this the rather, as, from the skin's proving sometimes extremely hard, the matter might be inwardly effused between the muscles, and upon their membranes, before it could penetrate through the skin. For this reason, as soon as matter is suspected to be formed, a surgeon should be called in, to determine exactly on the time, when an opening should be made; which had better be performed a little too soon than too late; and a little too deep, than not deep enough.

When the orifice has been made, and the discharge is effected, it is to be dressed up with the plaster No. 66, spread upon linen, or with the cerecloth; and these dressings are to be repeated daily.

§ 486. When the whitlow is caused by a humour extravasated very near the nail, an expert surgeon speedily checks its progress, and cures it effectually by an incision which lets out the humour. Yet, notwithstanding this operation is no-ways difficult, all surgeons are not qualified to perform it, and but too many have no idea at all of it.

§ 487. Fungous, or, as it is commonly called, Proud Flesh, sometimes appears during the incarning or healing of the incision. Such may be kept down with sprinkling a little *minium* (red lead) or burnt alum over it.

§ 488. If a *caries*, a rottenness of the bone, should be a consequence, there is a necessity for a surgeon's attendance, as much as if there was a gangrene; for which reason, I shall add nothing with respect to either of these symptoms; only observing, there are three very essential remedies against the last; *viz.* the bark No. 14, a drachm of which must be taken every two hours; scarifications throughout the whole gangrened part; and fomentations with a decoction of the bark, and the addition of spirit of sulphur. This medicine is certainly no cheap one; but a decoction of other bitter plants, with the addition of spirit of salt, may sometimes do instead of it. And here I take leave to insist again upon it, that in most cases of gangrened

ed limbs, it is judicious not to proceed to an amputation of the mortified part, till the gangrene stops, which may be known by a very perceivable circle, (and easily distinguished by the most ignorant persons) that marks the bounds of the gangrene, and separates the living from the mortified parts.

Of Thorns, Splinters, or other pointed Substances piercing into the Skin, or Flesh.

§ 489. It is very common for the hands, feet, or legs, to be pierced by the forcible intrusion of small pointed substances, such as thorns or prickles, whether of roses, thistles, or chestnuts, or little splinters of wood, bone, &c.

If such substances are immediately and entirely extracted, the accident is generally attended with no bad consequences; though more certainly to obviate any such, compresses of linen dipped in warm water may be applied to the part, or it may be kept a little while in a warm bath. But if any such pointed penetrating body cannot be directly extracted, or if a part of it be left within, it causes an inflammation, which, in its progress, soon produces the same symptoms as a whitlow: Or if it happens in the leg, it inflames and forms a considerable abscess there.

§ 490. To prevent such consequences, if the penetrating substance is still near the surface, and an expert surgeon is at hand, he must immediately make a small incision, and thence extract it. But if the inflammation were already formed, this would be useless, and even dangerous.

When the incision, therefore is improper, there should be applied to the affected part, (after conveying the steam of some hot water into it) either some very emollient poultices of the crumb of bread, milk, and oil, or some very emollient unctuous matter alone, the fat of a hare being generally employed in such cases, and being indeed very effectual to relax and supple the skin; and, by thus diminishing its resistance, to afford the offensive penetrating body an opportunity of springing forth. Nothing, however, but the grossest prejudice, could make any one imagine, that this fat attracted the splinter, thorn, or any other intruded substance by any sympathetic virtue; no other sympathy in nature being clearly demonstrated, except that very common one between wrong heads, and absurd extravagant opinions.

It

It is absolutely necessary, that the injured part should be kept in the easiest posture, and as immoveable as possible.

If suppuration has not been prevented by an immediate extraction of the offending substance, the abscess should be opened as soon as ever matter is formed. I have known very troublesome events from its being too long delayed.

§ 491. Sometimes the thorn, after having very painfully penetrated through the teguments, the skin, enters directly into the fat; upon which the pain ceases, and the patient begins to conclude no sharp pricking substance had ever been introduced into the part; and of course supposes none can remain there. Nevertheless, some days after, or in other instances, some weeks, fresh pains are excited, to which an inflammation and abscess succeed, which are to be treated as usual, with emollients, and seasonably opened.

A patient has been reduced to lose his hand, in consequence of a sharp thorn's piercing into his finger; from its having been neglected at first, and improperly treated afterwards.

Of Warts.

§ 492. Warts are sometimes the effects of a particular fault in the blood, which feeds and extrudes a surprizing quantity of them. This happens to some children, from four to ten years old, and especially to those who feed most plentifully on milk or milk-meats. They may be removed by a moderate change of their diet, and the pills prescribed No. 18.

But they are more frequently an accidental disorder of the skin, arising from some external cause.

In this last case, if they are very troublesome in consequence of their great size, their situation, or their long standing, they may be destroyed, 1. By tying them closely with a silk thread, or with a strong flaxen one waxed. 2. By cutting them off with a sharp scissars or a bistory, and applying a plaster of diachylon, with the gums, over the cut wart, which brings on a small suppuration that may destroy or dissolve the root of the wart: And, 3. By drying, or, as it were, withering them up by some moderately corroding application, such as that of the milky juice
of

of purslain *, of fig-leaves, of *chelidonium*, (swallow-wort) or of spurge. But besides these corroding vegetable milks being procurable only in summer, people who have very delicate thin skins should not make use of them, as they may occasion a considerable and painful swelling. Strong vinegar, charged with as much common salt as it will dissolve, is a very proper application to them. A plaster may also be composed from sal-ammoniac and some galbanum, which, being kneaded up well together and applied, seldom fails of destroying them.

The most powerful corrosives should never be used, without the direction of a surgeon; and even then it is full as prudent not to meddle with them, any more than with actual canteries. I have lately seen some very tedious and troublesome disorders and ulcerations of the kidneys ensue the application of a corrosive water, by the advice of a quack. Cutting them away is a more certain, a less painful, and a less dangerous way of removing them.

Wens, if of a pretty considerable size and duration, are incurable by any remedy, except amputation.

Of Corns.

§ 493. The very general or only causes of corns, are shoes either too hard and stiff, or too small.

The whole cure consists in softening the corns by repeated washings and soakings of the feet in pretty hot water; then in cutting them, when softened, with a pen-knife or scissars, without wounding the sound parts (which are the more sensible, in proportion as they are more extended than usual) and next in applying a leaf of house-leek, of groundivy, or of purslain dipt in vinegar, upon the part. Instead of these leaves, if any person will give himself the little trouble of dressing them every day, he may apply a plaster of simple diachylon, or of gum-ammoniacum softened in vinegar.

The increase or return of corns can only be prevented, by avoiding the causes that produce them.

* It is much to be doubted, whether the juice of purslain is so corrosive as our author seems to imagine. It composes the chief part of the sallads among the poor in warm climates, and is never productive of any mischief.

C H A P. XXXI.

Of Cases which require immediate Assistance; such as Swoonings, Hemorrhages, or involuntary Loss of Blood; Convulsion Fits, and Suffocations; the sudden Effects of great Fear; of Disorders caused by noxious Vapours; of Poisons, and of acute pains.

Of Swoonings.

S E C T. 494.

THERE are various kinds of swooning, or fainting away; the slightest is that in which the patient unvariably perceives and understands, yet without the power of speech. This is called a fainting, which happens frequently to vapourish persons, and without any observable alteration of the pulse.

If the patient totally loses sensation, or feeling, and understanding, with a very considerable sinking of the pulse, this is called a *Syncope*, and is the second degree of swooning.

But if this *Syncope* is so violent, that the pulse seems entirely extinguished; without any perceivable breathing; with a manifest chilliness of the whole body; and a wanly livid countenance, it constitutes a third and last degree, which is the true image of death, that in effect sometimes attends it, and it is called an *Asphyxy*, which may signify a total resolution.

Swoonings result from many different causes, of which I shall only enumerate the principal; and these are, 1. Too large a quantity of blood. 2. A defect or insufficient proportion of it, and a general weakness. 3. A load at, and violent disorders of the stomach. 4. Nervous maladies. 5. The passions; and 6. Some kinds of diseases.

Of Swoonings occasioned by Excess of blood.

§ 495. An excessive quantity of blood is frequently a cause of swooning; and it may be inferred that it is owing to this cause, when it attacks sanguine, hearty, and robust persons; and more especially when it attacks them, after being combined with any additional or supervening cause,

that suddenly increased the motion of the blood; such as heating meats or drinks, wine, spirituous liquors, smaller drinks, if taken very hot and plentifully, such as coffee, Indian-tea, balm-tea, and the like; a long exposure to hot sun, or being detained in a very hot place; much and violent exercise; and over intense and assiduous study or application, or some excessive passion.

In such cases, first of all the patient should be made to smell, or even to snuff up some vinegar; and his forehead, his temples, and his wrists should be bathed with it; adding an equal quantity of warm water, if at hand. Bathing them with distilled or spirituous liquids, would be prejudicial in this kind of swooning.

2. The patient should be made, if possible, to swallow two or three spoonfuls of vinegar, with four or five times as much water.

3. The patient's garters should be tied very tightly above his knees; as by this means a greater quantity of blood is retained in the legs, whence the heart may be less overladen with it.

4. If the fainting proves obstinate, that is, if it continues longer than a quarter of an hour, or degenerates into a *syncope*, an abolition of feeling and understanding, he must be bled in the arm, which quickly revives him.

5. After the bleeding, the injection of a glyster will be highly proper; and then the patient should be kept still and calm, only letting him drink, every half hour, some cups of elder-flower tea, with the addition of a little sugar and vinegar.

When swoonings which result from this cause occur frequently in the same person, he should, in order to escape them, pursue the directions I shall hereafter mention § 544, when treating of persons who superabound with blood.

The very same cause or causes, which occasion these swoonings, also frequently produce violent palpitations, under the same circumstances; the palpitation often preceding or following the *deliquium*, or swooning.

Of Swoonings occasioned by Weakness.

§ 496. If too great a quantity of blood, which may be considered as some excess of health, is sometimes the cause of swooning, this last is oftener the effect of a very contrary

trary cause, that is, of a want of blood, or an exhaustion of too much.

This sort of swooning happens after great hæmorrhages or discharges of blood; after sudden or excessive evacuations, such as one of some hours continuance in a *cholera morbus* (§ 321) or such as are more slow, but of longer duration, as, for instance, after an inveterate diarrhœa, or purging; excessive sweats; a flood of urine; such excesses as tend to exhaust nature; obstinate wakefulness; a long inappetency, which, by depriving the body of its necessary sustenance, is attended with the same consequence as profuse evacuations.

These different causes of swooning should be opposed by the remedies and means adopted to each of them. A detail of all these would be improper here; but the assistances that are necessary at the time of swooning, are nearly the same for all cases of this class, excepting for that attending a great loss of blood, of which I shall treat hereafter: First of all the patients should be laid down on a bed, and being covered, should have their legs and thighs, their arms, and their whole bodies rubbed pretty strongly with hot flannels; and no ligature should remain on any part of them.

2. They should have very spirituous things to smell or snuff up, such as the * English salt, the Carmelite water, Hungary water, spirit of sal-ammoniac, strong smelling herbs, such as rue, sage, rosemary, mint, wormwood, and the like.

3. These should be conveyed into their mouths; and they should be forced, if possible, to swallow some drops of Carmelite water, or of brandy, or of some other potable liquor, mixed with a little water; while some hot wine mixed with sugar and cinnamon, which makes one of the best cordials, is getting ready.

4. A compress of flannel, or of some other woollen stuff, dipt in hot wine, in which some aromatic herb has been steeped, must be applied to the pit of the stomach.

5. If the swooning seems likely to continue, the patient must be put into a well heated bed, which has before been

* This is no other than the volatile salt of vipers, and does not differ from the remedy, the spirit sal-ammoniac, which is in more common use. They are indeed both alkalis, and as such must be on the same footing, provided they are brought to the same purity.

perfumed with burning sugar and cinnamon; the frictions of the whole body with hot flannels being still continued.

6. As soon as the patient can swallow, he should take some soup or broth, with the yolk of an egg; or a little bread or biscuit soaked in the hot spiced wine.

7. Lastly, during the whole time that all other precautions are taken to oppose the cause of the swooning, care must be had for some days to prevent any *deliquium* or fainting, by giving them often, and but little at a time, some light yet strengthening nourishment, such as panada made with soup instead of water, new laid eggs very lightly poached, light roast meats with sweet sauce, chocolate soups of the most nourishing meats, jellies, milk, &c.

§ 497. Those swoonings, which are the effect of bleeding, or of the violent operation of some purge, are to be ranged in this class.

Such as happen after artificial bleeding, are generally very moderate, commonly terminating as soon as the patient is laid upon the bed; and persons subject to this kind should be bled lying down, in order to prevent it. But should the fainting continue longer than usual, some vinegar smelt to, and a little swallowed with some water, is a very good remedy.

The treatment of such faintings or swoonings, as are the consequences of too violent vomits or purges, may be seen hereafter, § 552.

Of Faintings, occasioned by a load, or uneasiness at the Stomach.

§ 498. It has been already observed, § 308, that indigestions were sometimes attended with swoonings, and indeed such vehement ones, as required speedy and very active succour too, such as that of a vomit. The indigestion is sometimes less the effect of the quantity, than of the quality or the corruption of the food, contained in the stomach. Thus we see there are some persons, who are disordered by eating eggs, fish, craw-fish, or any fat meat, being thrown by them into inexpressible anguish attended with swooning too. It may be supposed to depend on this cause, when these very aliments have been lately eaten; and when it evidently neither depends on

the other causes I have mentioned, nor on such as I shall soon proceed to enumerate.

We should, in cases of this sort, excite and revive the patients as in the former, by making them receive some very strong smell, of whatever kind is at hand; but the most essential point is to make them swallow down a large quantity of light warm fluid; which may serve to drown, as it were, the indigested matter; which may soften its acrimony; and either effect the discharge of it by vomiting, or force it down into the channel of the intestines.

A light infusion of chamomile-flowers, of tea, of sage, of elder-flowers, or of *carduus benedictus*, operate with much the same efficacy; though the chamomile and carduus promote the operation of vomiting rather more powerfully; which warm water alone will sometimes sufficiently do.

The swooning ceases, or at least considerably abates in these cases, as soon as ever the vomiting commences. It frequently happens too, that, during the swooning, nature herself brings on a certain *nausea*, a wambling and sickish commotion of the stomach, that revives or rouses the patient for a moment; but yet not being sufficient to excite an actual vomiting, lets him soon sink down again into this temporary dissolution, which often continues a pretty considerable time, leaving behind it a sickness at stomach, vertigos, and a depression and anxiety, which do not occur in the former species of this malady.

Whenever these swoonings from this cause are entirely terminated, the patient must be kept for some days to a very light diet, and take, at the same time, every morning fasting, a dose of the powder No. 38, which relieves and exonerates the stomach of whatever noxious contents might remain in it; and then restores its natural strength and functions.

§ 499. There is another kind of swooning, which also results from a cause in the stomach; but which is, nevertheless, very different from this we have just been treating of; and which requires a very different kind of assistance. It arises from an extraordinary sensibility of this important organ, and from a general weakness of the patient.

Those subject to this malady are valetudinary weakly persons, who are disordered from many slight causes, and

whose stomachs are at once very feeble and extremely sensible. They have almost continually a little uneasiness after a meal, though they should indulge but a little more than usual; or if they eat of any food not quite so easy of digestion, they have some qualm or commotion after it; nay, should the weather only be unfavourable, and sometimes without any perceivable assignable cause, their uneasiness terminates in a swoon.

Patients swooning, from these causes, have a greater necessity for great tranquillity and repose, than for any other remedy; and it might be sufficient to lay them down on the bed: But as the bystanders in such cases find it difficult to remain inactive spectators of persons in a swoon, some spirituous liquid may be held to their nose, while their temples and wrists are rubbed with it; and at the same time a little wine should be given them. Frictions are also useful in these cases,

This species of swooning is oftener attended with a little feverishness than the others.

Of those Swoonings which arise from nervous disorders.

§ 500. This species of swooning is almost wholly unknown to those persons for whom this treatise is chiefly intended. Yet as there are some citizens who pass a part of their lives in the country, and some country-people who are unhappily afflicted with the ailments of the inhabitants of large towns and cities, it seemed necessary to treat briefly of them.

By disorders of the nerves, I understand in this place, only that fault or defect in them, which is the cause of their exciting in the body either irregular motions, that is, motions without any external cause, at least any perceivable one, and without our will's consenting to the production of them; or such motions, as are greatly more considerable than they should be, if they had been proportioned to the force of the impression from without. This is very exactly that state, or affection, termed the *Vapours*; and by the common people, the *Motber*: And as there is no organ unprovided with nerves; and none, or hardly any function, in which the nerves have not their influence, it may be easily comprehended, that the vapours being a state or condition which arises from the nerves exerting irregular involuntary motions, without any

any evident cause, and all the functions of the body depending partly on the nerves, there is no one symptom of other diseases which the vapours may not produce or imitate; and that these symptoms, for the same reason, must vary infinitely, according to those branches of the nerves which are disordered. It may also hence be conceived, why the vapours of one person have frequently no resemblance to those of another; and why the vapours of the very same person, in one day, are so very different from those in the next. It is also very conceivable, that the vapours are a certain, a real malady; and that oddity of the symptoms, which cannot be accounted for, by people unacquainted with the animal œconomy, has been the cause of their being considered rather as the effect of a depraved imagination, than as the real disease. It is very conceivable, I say, that this surprizing oddity of the symptoms is a necessary effect of the cause of the vapours, and that no person can any more prevent his being invaded by the vapours, than that he can prevent the attack of a fever, or of the tooth-ach.

§ 501. A few plain instances will furnish out a more compleat notion of the mechanism, or nature of vapours. An emetic, a vomiting medicine excites the act, or rather the passion, the convulsion or vomiting, chiefly by the irritation it gives to the nerves of the stomach; which irritation produces a spasm, a contraction of this organ. Now, if in consequence of this morbid or defective texture of the nerves, which constitutes the vapours, those of the stomach are excited to act with the same violence, as in consequence of taking a vomit, the patient will be agitated and worked by violent efforts to vomit, as much as if he had really taken one,

If an involuntary unusual motion in the nerves, that are distributed through the lungs, should constrain and straiten the very little vesicles, or bladders, as it were, which admit the fresh air at every respiration, the patient will feel a degree of suffocation, just as if that straitening or contraction of the vessels were occasioned by some noxious steam or vapour.

Should the nerves which are distributed throughout the whole skin, by a succession of these irregular morbid motions, contract themselves, as they may from external cold, or by some stimulating application, perspiration by

the pores will be prevented or checked; whence the humours, which should be evacuated through the pores of the skin, will be thrown upon the kidneys, and the patient will make a great quantity of thin clear urine, a symptom very common to vapourish people; or it may be diverted to the glands of the intestines, the guts, and terminate in a watery *diarrhœa*, or looseness, which frequently proves a very obstinate one.

§ 502. Neither are swoonings the least usual symptoms attending the vapours: And we may be certain they spring from this source, when they happen to a person subject to the vapours; and none of the other causes producing them are evident, or have lately preceded them.

Such swoonings, however, are indeed very rarely dangerous, and scarcely require any medical assistance. The patient should be laid upon a bed: the fresh air should be very freely admitted to him; and he should be made to smell rather to some disagreeable and scetid, than to any fragrant substance. It is in such faintings as these, that the smell of burnt leather, of feathers, or of paper, have often proved of great service.

§ 503. Patients also frequently faint away, in consequence of fasting too long, or from having eat a little too much; from being confined in too hot a chamber; from having seen too much company; from smelling too overpowering a scent; from being too costive; from being too forcibly affected with some discourse or sentiments; and, in a word, from a great variety of causes, which might not make the least impression on persons in perfect health; but which violently operate upon those vapourish people, because, as I have said, the fault of their nerves consists in their being too vividly, too acutely affected; the force of their sensation being no-wise proportioned to the external cause of it.

As soon as that particular cause is distinguished from all the rest, which has occasioned the present swooning; it is manifest that this swooning is to be remedied by removing that particular cause of it.

Of Swoonings occasioned by the Passions.

§ 504. There have been some instances of persons dying within a moment, through excessive joy. But such instances are so very rare and sudden, that assistance has seldom

dom been sought for on this occasion. The case is otherwise with respect to those produced from rage, vexation, and dread or horror. I shall treat in a separate article of those resulting from great fear; and shall briefly consider here, such as ensue from rage, and vehement grief or disappointment.

§ 505. Excessive rage and violent affliction are sometimes fatal in the twinkling of an eye; though they oftner terminate in fainting only. Excessive grief or chagrin is especially accompanied with this consequence; and it is very common to see persons thus affected, sink into successive faintings for several hours. It is plainly obvious, that very little assistance can be given in such cases: It is proper, however, they should smell to strong vinegar; and frequently take a few cups of some hot and temperately cordial drink, such as balm-tea, or lemonade with a little orange or lemon-peel.

The calming assuaging cordial, that has seemed the most efficacious to me, is one small coffee-spoonful of a mixture of three parts of the mineral anodyne liquor of *Hoffman* *, and one part of the spirituous tincture of amber, which should be swallowed in a spoonful of water; taking after it a few cups of such drinks as I shall presently direct.

It is not to be supposed, that swoonings or faintings, from excessive passions, can be cured by nourishment. The physical state or condition, into which vehement grief throws the body, is that, of all others, in which nourishment would be most injurious to it: And as long as the vehemence of the affliction endures, the sufferer should take nothing but some spoonfuls of soup or broth, or a few morsels of some light meat roasted.

§ 506. When wrath or rage has risen to so high a pitch, that the human body, entirely exhausted, as it were, by that violent effort, sinks down at once into excessive relaxation, a fainting sometimes succeeds, and even the most perilous degree of it, a *syncope*.

It is sufficient, or rather the most that can be done here, to let the patient be perfectly still a while in this state; only making him smell to some vinegar. But when he is come to himself, he should drink plentifully of hot lemonade, and take one or more of the glysters No. 5.

* Our sweet spirit of vitriol is a medicine of the same nature, and equally efficacious.

Sometimes there remain in these cases sicknesses at stomach, reachings to vomit, a bitterness in the mouth, and some vertiginous symptoms which seem to require a vomit. But such a medicine must be very carefully avoided, since it may be attended with the most fatal consequence; and lemonade with glysters generally and gradually remove these swoonings. If the *nausea* and sickness at stomach continue, the utmost medicine we should allow besides, would be that of No. 23, or a few doses of No. 24.

Of symptomatical Swoonings, or such as happen in the progress of other diseases.

§ 507. Swoonings, which supervene in the course of other diseases, never afford a favourable prognostic; as they denote weakness, and weakness is an obstacle to recovery.

In the beginning of putrid diseases, they also denote an oppression at stomach, or a mass of corrupt humours; and they cease, as soon an evacuation supervenes, whether by vomit or stool.

When they occur at the beginning of malignant fevers, they declare the high degree of their malignancy, and the great diminution of the patient's natural strength.

In each of these cases, vinegar used externally and internally, is the best remedy during the exacerbation or height of the paroxysm: and plenty of lemon juice and water after it.

§ 508. Swoonings which supervene in diseases, accompanied with great evacuations, are cured like those which are owing to weakness; and endeavours should be used to restrain or moderate the evacuations.

§ 509. Those who have any inward abscess or imposthume are apt to swoon frequently. They may sometimes be revived a little by vinegar, but they prove too frequently mortal.

§ 510. Many persons have a slighter or a deeper swooning, the end of a violent fit of an intermitting fever, or at that of each exacerbation of a continual fever; this constantly shews the fever has run very high, the swooning having been the consequence of that great relaxation, which has succeeded to a very high tension. A spoonful or two of light white-wine, with an equal quantity of water, affords all the succour proper in such a case.

§ 511.

§ 511. Persons subject to frequent swoonings, should neglect nothing that may enable them to remove them when known; since the consequences of them are always detrimental, except in some fevers, in which they seem to mark the *crisis*.

Every swooning fit leaves the patient in dejection and weakness; the secretions from the blood are suspended; the humours disposed to stagnation; grumosities, or coagulations, and obstructions are formed; and if the motion of the blood is totally intercepted, or considerably checked, *polypuses*, and these often incurable, are formed in the heart, or in the larger vessels; the consequences of which are dreadful, and sometimes give rise to internal aneurisms, which always prove mortal, after long anxiety and oppression.

Swoonings which attack old people, without any manifest cause, always afford an unfavourable prognostic.

Of Hæmorrhages, or an involuntary loss of blood.

§ 512. Hæmorrhages of the nose, supervening in inflammatory fevers, commonly prove a favourable *crisis*; which bleeding we should carefully avoid stopping; except it becomes excessive, and seems to threaten the patient's life.

As they scarcely ever happen in very healthy subjects, but from a superfluous abundance of blood, it is very improper to check them too soon; lest some internal stuffs and obstructions should prove the consequence.

A swooning sometimes ensues after the loss of only a moderate quantity of blood. This swooning stops the hæmorrhage, and goes off without any further assistance, except the smelling to vinegar. But in other cases there is a succession of fainting fits, without the blood's stopping; while at the same time, slight convulsive motions and twitchings ensue, attended with a raving, when it becomes really necessary to stop the bleeding; and, indeed, without waiting till these violent symptoms appear, the following signs will sufficiently direct us, when it is right to stop the flux of blood, or to permit its continuance.—As long as the pulse is still pretty full; while the heat of the body is equally extended to the very extremities; and the countenance and lips preserve their natural redness, no ill consequence is to be apprehended from the hæmorrhage,

hæmorrhage, though it has been very copious, and even somewhat profuse.

But whenever the pulse begins to falter and tremble ; when the countenance and the lips grow pale, and the patient complains of a sickness at stomach, it is absolutely necessary to stop the discharge of blood. And considering that the operation of remedies does not immediately follow the exhibition or application of them, it is safer to begin a little too early with them, than to delay them, though ever so little too long.

§ 513. First of all then, tight bandages, or ligatures, should be applied round both arms, on the part they are applied over in order to bleeding ; and round the lower part of both thighs, on the gartering place ; and all these are to be drawn very tight, with an intention to detain and accumulate the blood in the extremities.

2. In order to increase this effect, the legs are to be plunged in warm water up to the knees ; for by relaxing the blood-vessels of the legs and feet, they are dilated at the same time, and thence receive, and, in consequence of the ligatures above the knees, retain the more blood. If the water were cold, it would repel the blood to the head ; if hot, it would increase the motion of it ; and, by giving a greater quickness to the pulse, would even contribute to increase the hæmorrhage.

As soon however as the hæmorrhage is stopt, these ligatures (on the thighs) may be relaxed a little, or one of them be entirely removed, allowing the others to continue on an hour or two longer without touching them : But great precaution should be taken not to slacken them entirely, nor all at once.

3. Seven or eight grains of nitre, and a spoonful of vinegar, in half a glass of cool water, should be given the patient every half hour.

4. One drachm of white vitriol must be dissolved in two common spoonfuls of spring water ; and a tent of lint, or bits or soft fine linen dipt in this solution, are to be introduced into the nostrils, horizontally at first, but afterwards to be intruded upwards, and as high as may be, by the assistance of a flexible bit of wood or whale bone. But should this application be ineffectual, the mineral anodyne liquor of *Hoffman* is certain to succeed : And in the country, where it often happens that neither of these applications are to be had speedily, brandy, and even spirit
of

of wine, mixed with a third part vinegar, have answered entirely well, of which I have been a witness.

The prescription No. 67, which I have already referred to, on the article of wounds, may also be serviceable on this occasion. It must be reduced to powder, and conveyed up the nostrils as high as may be, on the point or extremity of a tent of lint, which may easily be covered with it. Or a quill, well charged with the powder, may be introduced high into the nostrils, and its contents be strongly blown up from its other extremity: Though, after all, the former method is preferable.

§ 515. When the flux of blood is totally stopt, the patient is to be kept as still and quiet as possible; taking great care not to extract the tent which remains in the nose: nor to remove the clots of coagulated blood which fill up the passage. The loosening and removing of these should be effected very gradually and cautiously; and frequently the tent does not spring out spontaneously, till after many days.

§ 514. I have not, hitherto, said any thing of artificial bleeding in these cases, as I think it at best unserviceable; since, though it may sometimes have stopt the morbid loss of blood, it has at other times increased it. Neither have I mentioned anodynes here, whose constant effect is to determine a larger quantity of blood to the head.

Applications of cold water to the nape of the neck ought to be wholly disused, having sometimes been attended with the most embarrassing consequences.

In all hæmorrhages, all fluxes of blood, great tranquillity, ligatures, and the use of the drinks, No. 2 or 4, are very useful.

§ 515. People who are very liable to frequent hæmorrhages, ought to manage themselves conformably to the directions contained in the next chapter, § 544. They should take very little supper; avoid all sharp and spirituous liquors, apartments that are over hot, and cover their heads but very lightly.

When a patient has for a long time been subject to hæmorrhages, if they cease he should retrench from his usual quantity of food, accustom himself to artificial bleedings at proper intervals, and take some gentle opening purges especially that of No. 24, and frequently a little nitre in an evening.

Of Convulsion Fits.

§ 516. Convulsions are, in general, more terrifying than dangerous; they result from many and various causes, and on the removal or extirpation of these, their cure depends.

In the very fit itself very little is to be done or attempted.

As nothing does shorten the duration, nor even lessen the violence of an epileptic fit, so nothing at all should be attempted in it; and the rather because means and medicines often aggravate the disease. We should confine our endeavours solely to the security of the patient, by preventing him from giving himself any violent strokes; by getting something, if possible, between his teeth, such as a small roller of linen to prevent his tongue from being hurt, or very dangerously squeezed and bruised, in a strong convulsion.

The only case which requires immediate assistance in the fit, is, when it is so extremely violent, the neck so swelled, and the face so very red, that there is room to be apprehensive of an apoplexy, which we should endeavour to obviate, by drawing eight or ten ounces of blood from the arm.

As this terrible malady is common in the country, it is doing a real service to the unfortunate victims of it, to inform them how very dangerous it is to give themselves blindly up to take all the medicines, which are cried up to them in such cases. If there be any one disease, which requires a more attentive, delicate, and exquisite kind of treatment, it is this very disease. Some species of it are wholly incurable: And such as may be susceptible of a cure, require the utmost care and consideration of the most enlightened and most experienced physicians: While those who pretend to cure all epileptic patients, with one invariable medicine, are either ignorant, or impostors, and sometimes both in one.

§ 517. Simple convulsion-fits, which are not epileptic, are frequently of a long continuance, persevering, with very few and short intervals, for days and even for weeks.

The true genuine cause should be investigated as strictly as possible, though nothing should be attempted in the fit.

fit. The nerves are, during that term, in so high a degree of tension and sensibility, that the very medicines, supposed to be strongly indicated, often redouble the storm they were intended to appease.

Thin watery liquors, moderately imbued with aromatics, are the least hurtful, the most innocent things that can be given; such as balm, lime-tree, and elder flower tea. A ptisan of liquorice-root only has sometimes answered better than any other.

Of suffocating, or strangling Fits.

§ 518. These fits (by whatever other name they may be called) whenever they very suddenly attack a person, whose breathing was easy and natural just before, depend almost constantly on a spasm or contraction of the nerves in the vesicles of the lungs; or upon an infarction, a stuffing of the same parts, produced by viscid clammy humours.

That suffocation, which arises from a spasm is not dangerous, it goes off of itself, or it may be treated like swoonings owing to the same cause. See § 502.

§ 519. That suffocation, which is the effect of a sanguineous fulness and obstruction, may be distinguished by its attacking strong, vigorous, sanguine persons, who are great eaters, using much juicy nutritious food, and strong wine and liquors, and who frequently eat and inflame themselves, and when the fit has come on after any inflaming cause, when the pulse is full and strong, and the countenance red.

Such are cured, 1. By a very plentiful discharge of blood from the arm. which is to be repeated, if necessary.

2. By the use of glysters.

3. By drinking plentifully of the ptisan No. 1; to each part of which, a drachm of nitre is to be added: And,

4. By the vapour of hot vinegar, continually received by respiration or breathing. See § 55.

§ 520. There is reason to think that one of these fits is owing to a quantity of tough viscid humours in the lungs, when it attacks persons, whose temperament, and whose manner of living are opposite to those I have just described, such as valetudinary, weakly, phlegmatic, pituitous, inactive,

tive, and squeamish persons, who feed badly, or on fat, viscid, and insipid diet, and who drink much hot water, either alone, or in tea like infusions. And these signs of suffocation, resulting from such causes, are still more probable, if the fit came on in rainy weather, and during a southerly wind, and when the pulse is soft and small, the visage pale and fallow.

The most efficacious treatment we can advise, is, 1. To give every half hour half a cup of the potion No. 8, if it can be readily had. 2. To make the patient drink very plentifully of the drink No. 12. And 3. To apply two strong blisters to the fleshy parts of his legs.

If he was strong and hearty before the fit, and the pulse still continues vigorous, and feels somewhat full withal, the loss of seven or eight ounces of blood is sometimes indispensably necessary. A glyster has also frequently been attended with extraordinary good effects.

Those afflicted with this oppressing malady are commonly relieved, as soon as they expectorate, and sometimes even by vomiting a little.

The medicine No. 25, a dose of which may be taken every two hours, with a cup of the pisan No. 12, often succeeds very well.

But if neither this medicine, nor the prescription of No. 8, are at hand, which may be the case in country places, an onion of a moderate size should be pounded in an iron or marble mortar; upon this, a glass of vinegar is to be poured, and then strongly squeezed out again thro' a piece of linen. An equal quantity of honey is then to be added to it. A spoonful of this mixture, whose remarkable efficacy I have been a witness of, is to be given every half hour.

Of the violent Effects of Fear.

§ 521. Here I shall insert some directions to prevent the ill consequences of great fear or terror, which are very prejudicial at every term of life, but chiefly during infancy.

The general effects of terror, are a great straitening or contraction of all the small vessels, and a repulsion of the blood into the large and internal ones. Hence follow the suppression of perspiration, the general seizure or oppression, the trembling, the palpitations and anguish,
from

from the heart and the lungs being overcharged with blood, and sometimes attended with swoonings, irremediable disorders of the heart, and death itself. A heavy drowsiness, raving, and a kind of furious or raging *delirium* happen in other cases, which I have frequently observed in children, when the blood vessels of the neck were swelled and stuffed up, and convulsions, and even the epilepsy, have come on, all which have proved the horrible consequence of a most senseless and wicked foolery or sporting. One half of those epilepsies which do not depend on such causes, as might exist before the child's birth, are owing to this detestable custom; and it cannot be too much inculcated into children, never to frighten one another; a point which persons intrusted with their education, ought to have the strictest regard to.

When the humours that should have passed off by perspiration, are repelled to the intestines, a tedious and very obstinate looseness is the frequent consequence.

§ 522. Our endeavours should be directed to re-establish the disordered circulation, to restore the obstructed perspiration, and to allay the agitation of the nerves.

The popular custom in these cases has been to give the terrified patient some cold water directly; but when the fright has been considerable, this is a very pernicious custom, and I have seen some terrible consequences from it.

They should, on the contrary, be conveyed into some very quiet situation, leaving there but very few persons, and such only as they are thoroughly familiar with. They should take a few cups of pretty warm drink, particularly of an infusion of lime-tree flowers and balm. Their legs should be put into warm water, and remain there an hour, if they will patiently permit it, rubbing them gently now and then, and giving them every half quarter of an hour a small cup of the said drink. When their composure and tranquillity are returned a little, and their skin seems to have recovered its wonted and general warmth, care should be taken to dispose them to sleep, and to perspire plentifully. For this purpose they may be allowed a few spoonfuls of wine, on putting them into bed, with one cup of the former infusion, or, which is more certain and effectual, a few drops of SYDENHAM's liquid laudanum, No. 44; but should that not be near at hand, a small dose of Venice-treacle.

§ 523. It sometimes happens that children do not seem at first extremely terrified ; but the fright is renewed while they sleep, and with no small violence. The directions I have just given must then be observed, for some successive evenings, before they are put to bed.

Their fright frequently returns about the latter end of the night, and agitates them violently every day. The same treatment should be continued in such cases, and we should endeavour to dispose them to be asleep at the usual hour of its return.

By this very method, I have dissipated the dismal consequences of fear on women in child-bed, which is so commonly and often speedily mortal.

If a suffocation from this cause is violent, there is sometimes a necessity for opening a vein in the arm.

These patients should gradually be inured to an almost continual but gentle kind of exercise.

All violent medicines render those diseases, which are the consequences of great fear, incurable. A pretty common one is that of an obstruction of the liver, which has been productive of a jaundice.

Of accidents or symptoms produced by the vapours of coal, and of wine.

§ 324. Not a single year passes over here, without the destruction of many people by the vapour of charcoal, or of small coal, and by the steam or vapour of wine.

The symptoms by coal occur, when * small coal, and especially when charcoal is burnt in a chamber close shut, which is direct poison to a person shut up in it. The sulphureous oil, which is set at liberty and diffused by the action of fire, expands itself through the chamber, while those who are in it perceive a disorder and confusion in their heads ; contract vertigos, sickness at stomach, a weakness, and a very unusual kind of numbness, become raving, convulsed and trembling ; and if they fail of presence of mind, or of strength to get out of the chamber, they die within a short time.

I have seen a woman who had vertiginous commotions in her head for two days, and almost continual vomitings, from her having been confined less than six minutes in a chamber (and that notwithstanding both one window and one door were open) in which there was a chafing-dish with

* La Braïse.

with some burning coals. Had the room been quite close, she must have perished by it.

This vapour is narcotic or stupifying, and proves mortal in consequence of its producing a sleepy or apoplectic disorder, though blended, at the same time, with something convulsive, which sufficiently appears from the closure of the mouth, and the strick contraction or locking of the jaws.

The condition of the brain in the dissected bodies of persons thus destroyed, proves that they die of an apoplexy: Notwithstanding it is very probable that suffocation is also partly the cause of their deaths; as the lungs have been found stuffed up with blood and livid.

It has also been observed in some other such bodies, that patients killed by the vapour of burning coals, have commonly their whole bodies swelled out to one third more than their magnitude when living. The face, neck, and arms are swelled out, as if they had been blown up; and the whole human machine appears in such a state, as the dead body of a person would, who had been violently strangled, and who had made all possible resistance for a long time before he was overpowered.

§ 525. Such as are sensible of the great danger they are in, and retreat seasonably from it, are generally relieved as soon as they get into the open air; or if they have any remaining uneasiness, a little water and vinegar, or lemonade, drank hot, affords them speedy relief. But when they are so far poisoned, as to have lost their feeling and understanding, if there be any means of reviving them, such means consist,

1. In exposing them to a very pure, fresh, and open air.

2. In making them smell to some very penetrating odour, which is somewhat stimulating and reviving, such as the volatile spirit of sal-ammoniac, the English salt; and afterwards to surround them, as it were, with the steam of vinegar.

3. In taking some blood from the arm.

4. In putting their legs into warm or hot water, and chafing them well.

5. In making them swallow, if practicable, much lemonade, or water and vinegar, with the addition of nitre: And,

6. In throwing up some sharp glysters.

As it is manifest there is something spasmodic in these cases, it were proper to be provided with some antispasmodic remedies, such as the mineral anodyne liquid of HOFFMAN. Even opium has sometimes been successfully given here, but it should be allowed to physicians only to direct it in such cases.

A vomit would be hurtful, and the reachings to vomit arise only from the oppression on the brain.

It is a common but erroneous opinion, that if the coal be suffered to burn for a minute or so in the open air, or in a chimney, it is sufficient to prevent any danger from the vapour of it.

Hence it amounts even to a criminal degree of imprudence, to sleep in a chamber while charcoal or small coal is burning in it; and the number of such imprudent persons, as have never awaked after it, is so considerable, and so generally known too, that the continuance of this unhappy custom is astonishing.

§ 526. The bakers, who make much use of small coal, often keep great quantities of it in their cellars, which frequently abound so much with the vapour of it, that it seizes them violently the moment they enter into the cellar. They sink down at once, deprived of all sensation, and die, if they are not drawn out of it soon enough to be assisted, according to the directions I have just given.

One certain means of preventing such fatal accidents is, upon going into the cellar to throw some flaming paper or straw into it, and if these continue to flame out and consume, there is no reason for dreading the vapour; but if they should be extinguished, no person should venture in. But after opening the vent-hole, a bundle of flaming straw must be set at the door, which serves to attract the external air strongly. Soon after the experiment of the flaming paper must be repeated, and if it goes out, more straw is to be set on fire before the cellar door.

§ 527. Small coal, burnt in an open fire, is not near so dangerous as charcoal, properly so called, the danger of which arises from this, that in extinguishing it by the usual methods, all those sulphureous particles of it, in which its danger consists are concentrated. Nevertheless, small coal is not entirely deprived of all its noxious quality, without some of which it could not strictly be coal.

The common method of throwing some salt on live coals, before they are conveyed into a chamber, or of casting

casting a piece of iron among them to imbibe some part of their deadly narcotic sulphur, is not without its utility : though by no means sufficient to prevent all danger from them.

§ 528. When the most dangerous symptoms from this cause disappear, and there remains only some degree of weakness, of numbness, and a little inappetency, or loathing of stomach, nothing is better than lemonade with one fourth part wine, half a cup of which should frequently be taken, with a small crust of bread

§ 529. The vapour which exhales from wine, and in general from all fermenting liquors, such as beer, cyder, &c. contains something poisonous, which kills in the like manner with the vapour of coal ; and there is always some danger in going into a cellar, where there is much wine in the state of fermentation, if it has been shut up close for several hours. There have been many examples of persons struck dead on entering one, and of others who have escaped out of it with difficulty.

When such unhappy accidents occur, men should not be successively exposed, one after another, to perish, by endeavouring to fetch out the first who sunk down upon his entrance ; but the air should be immediately purified by the method already directed, or by discharging some guns into the cellar, after which people may venture in with precaution. And when the persons unfortunately afflicted are brought out, they are to be treated like those, who were affected with the coal vapour.

I saw a man, about eight years since, who was not sensible of the application of the spirit of sal-ammoniac, till about an hour after he was struck down, and who was entirely freed at last by a plentiful bleeding ; though he had been so insensible, that it was several hours before he discovered a very great wound he had, which extended from the middle of his arm to his arm-pit, and which was made by a hook intended to be used, in case of a house catching fire, to assist persons in escaping from the flames.

§ 530. When subterraneous caves that have been very long shut are opened ; or when deep wells are cleaned, that have not been emptied for several years, the vapours arising from them produce the same symptoms I have mentioned, and require the same assistance. They are to be cleansed and purified by burning sulphur and salt-petre in them, or gun-powder, as compounded of both.

§ 531. The offensive stink of lamps, and of candles, especially when their flames are extinguished, operate like other vapours, though with less violence, and less suddenly. Nevertheless there have been instances of people killed by the fumes of lamps fed with nut oil, which have been extinguished in a close room. These last smells or fumes prove noxious also, in consequence of their greasiness, which being conveyed, together with the air, into the lungs, prevent their respiration: And hence we may observe, that persons of weak delicate breasts find themselves quickly oppressed in chambers or apartments, illuminated with many candles.

The proper remedies have been already directed, § 525
The steam of vinegar is very serviceable in such cases.

Of Poisons.

§ 532. There are a great number of poisons, whose manner of acting is not alike, and whose ill effects are to be opposed by different remedies; but arsenic, or ratsbane, and some particular plants, are the poisons which are the most frequently productive of mischief, in country places.

§ 533. It is in consequence of its excessive acrimony, or violent heat and sharpness, which corrodes or gnaws, that arsenic destroys by an excessive inflammation, with a burning fire as it were, most torturing pains in the mouth, throat, stomach, guts, with rending and often bloody vomitings, and stools, convulsions, faintings, &c.

The best remedy of all is pouring down whole torrents of milk, or, where there is not milk, of warm water. Nothing but a prodigious quantity of such weak liquids can avail such a miserable patient. If the cause of the disorder is immediately known, after having very speedily taken down a large quantity of warm water, vomiting may be excited with oil, or with melted butter, and by tickling the inside of the throat with a feather. But when the poison has already inflamed the stomach and the guts, we must not expect to discharge it by vomiting. Whatever is healing or emollient, decoctions of mealy pulse, of barley, of oatmeal, of marsh-mallows, and butter and oil, are the most suitable.

As soon as ever the tormenting pains are felt in the belly, and the intestines seem attacked, glysters of milk must be very frequently thrown up.

If

If, at the very beginning of the attack, the patient has a strong pulse, a very plentiful bleeding may be considerably serviceable, by its delaying the progress, and diminishing the degree of inflammation.

And even though it should happen that a patient overcomes the first violence of this dreadful accident, it is too common for him to continue in a languid state for a long time, and sometimes for all the remainder of his life. The most certain method of preventing this misery, is to live for some months solely upon milk, and some new-laid eggs, just received from the hen, and dissolved or blended in the milk, without boiling them.

§ 534. The plants which chiefly produce these unhappy accidents are some kinds of hemlock, whether it be the leaf or the root; the berries of the *bella donna*, or deadly nightshade, which children eat by mistake for cherries; some kind of mushrooms; the seed of the *datura*, or the stinking thorn-apple.

All the poisons of this class prove mortal rather from a narcotic, or stupifying, than from an acrid, or very sharp quality. Vertigos, faintings, reachings to vomit, and actual vomitings, are the first symptoms produced by them.

The patient should immediately swallow down a large quantity of water, moderately seasoned with salt or with sugar; and then a vomiting should be excited as soon as possible by the prescription No. 34, or 35; or, if neither of these is very readily procurable, with radish-seed pounded, to the quantity of a coffee spoonful, swallowed in warm water, soon after forcing a feather or a finger into the patient's throat, to expedite the vomiting.

After the operation of the vomit, he must continue to take a large quantity of water, sweetened with honey or sugar, together with a considerable quantity of vinegar, which is the true specific, or antidote, as it were, against these poisons: The intestines must also be emptied by a few glysters.

Thirty-seven soldiers having unhappily eaten, instead of carrots, of the roots of the *Oenanthe*, or water-hemlock, became all extremely sick; when the emetic, No. 34, with the assistance of glysters, and very plentiful drinking of warm water, saved all but one of them, who died before he could be assisted.

§ 535. If a person has taken too much opium, or any medicine into which it enters, as venice-treacle, mithri-

date,

date, diascordium, &c. whether by imprudence, mistake, ignorance, or through any bad design, he must be bled upon the spot, and treated as if he had a sanguine apoplexy (see § 147), by reason that opium in effect produces such a one. He should snuff up and inhale the vapour of vinegar plentifully, adding it also liberally to the water he is to drink.

Of acute Pains.

§ 526. It is not my intention to treat here of those pains, that accompany any evident known disease, and which should be conducted as relating to such diseases; nor of such pains as infirm valetudinary persons are habitually subject to; since experience has informed such of the most effectual relief for them: But when a person sound and hale, finds himself suddenly attacked with some excessive pain, in whatever part it occurs, without knowing either the nature or the cause of it, they may, till proper advice can be procured,

1. Part with some blood, which, by abating the fullness and tension, almost constantly assuages the pains, at least for some time; and it may even be repeated, if, without weakening the patient much, it has lessened the violence of the pain.

2. The patient should drink abundantly of some very mild temperate drink, such as the ptisan No. 2, the almond emulsion No. 4, or warm water, with a fourth or fifth part milk.

3. Several emollient glysters should be given.

4. The whole part that is affected, and the adjoining parts, should be covered with cataplasms, or soothed with the emollient fomentation, No. 9.

5. The warm bath may also be advantageously used.

6. If, notwithstanding all these assistances, the pain should still continue violent, and the pulse is neither full nor hard, the grown patient may take an ounce of syrup of diacodium, or sixteen drops of liquid laudanum; and when neither of these are to be had, an *English* pint * of boiling water must be poured upon three or four poppy heads with their seeds, but without their leaves, and this decoction is to be drank like tea.

* Une quartette.

§ 537. Persons very subject to frequent pains, and especially to violent head-achs, should abstain from all strong drink ; such abstinence being often the only means of curing them : And people are very often mistaken in supposing wine necessary for as many as seem to have a weak stomach.

C H A P. XXXII.

Of giving Remedies by way of Precaution or Prevention.

Of bleeding.—Of purges.—Remedies to be used after excessive purging.—Reflections on some other remedies.

S E C T. 538.

I HAVE pointed out, in some parts of this work, the means of preventing the bad effects of several causes of diseases, and of prohibiting the return of some habitual disorders. In the present chapter I shall adjoin some observations on the use of principal remedies, which are employed as general preservatives ; pretty regularly too, at certain stated times, and almost always from mere custom only, without knowing, and often with very little consideration, whether they are right or wrong.

Nevertheless, the use, the habit of taking medicines, is certainly no indifferent matter : It is ridiculous, dangerous, and even criminal to omit them, when they are necessary, but not less so to take them when they are not wanted. A good medicine taken seasonably, when there is some disorder, some *disarrangement* in the body, which would in a short time occasion a distemper, has often prevented it. But yet the very same medicine, if given to a person in perfect health, if it does not directly make him sick, leaves him at the best in a greater propensity to the impressions of diseases ; and there are but too many examples of people, who having very unhappily contracted a habit, a disposition to take physick, have really injured their health, and impaired their constitutions, however naturally strong, by an abuse of those materials which Providence has given for the recovery and re-establishment of it ; an abuse which, though it should not injure the health of the person, would occasion those remedies, when

when he should be really sick, to be less efficacious and serviceable to him, from their having been familiar to his constitution; and thus he becomes deprived of the assistance he would have received from them, if taken only in those times and circumstances in which they were necessary for him.

Of Bleeding.

§ 539. Bleeding is necessary only in these four cases. 1. When there is too great a quantity of blood in the body. 2. When there is any inflammation, or an inflammatory disease. 3. When some cause supervenes, or is about to supervene, in the constitution, which would speedily produce an inflammation, or some other dangerous symptoms, if the vessels were not relaxed by bleeding. It is upon this principle that patients are bled after wounds, and after bruises, that bleeding is directed for a pregnant woman, if she has a violent cough; and that bleeding is performed by way of precaution, in several other cases. 4. We also advise bleeding sometimes to assuage an excessive pain, though such pain is not owing to an excess of blood, nor arises from any inflamed blood, but in order to appease and moderate the pain by bleeding, and thereby to obtain time for destroying the cause of it by other remedies. But as these two last reasons are in effect involved or implied in the two first, it may be very generally concluded, that an excess of blood, and an inflamed state of it, are the only two necessary motives for bleeding.

§ 540. An inflammation of the blood is known by the symptoms accompanying those diseases, which that cause produces. Of these I have already spoken, and I have at the same time regulated the practice of bleeding in such cases. Here I shall point out those symptoms and circumstances, which manifest an excess of blood.

The first, then, is the general course and manner of the patient's living, while in health. If he is a great eater, and indulges in juicy nutritious food, and especially on much flesh meat; if he drinks rich and nourishing wine, or other strong drink, and at the same time enjoys a good digestion; if he takes but little exercise, sleeps much, and has not been subject to any other considerable evacuation, he may well be supposed to abound in blood. It is very obvious that all these causes rarely occur in country people:

if

if we except only the abatement of their exercise, during some weeks in winter, which indeed may contribute to their generating more blood than they commonly do.

The labouring country-man, for much the greater part of his time, lives only on bread, water and vegetables; materials but very moderately nourishing, as one pound of bread probably does not make, in the same body, more blood than one ounce of flesh; though a general prejudice seems to have established a contrary opinion. 2. The total stopping or long interruption of some involuntary bleeding or hæmorrhage, to which he had been accustomed. 3. A full and strong pulse, and veins visibly filled with blood, in a body that is not lean and thin, and when he is not heated. 4. A florid lively ruddiness. 5. A considerable and unusual numbness; sleep more profound, of more duration, and yet less tranquil and calm, than at other times; a greater propensity than ordinary to be fatigued after moderate exercise or work; and a little oppression and heaviness from walking. 6. Palpitations, accompanied sometimes with very great dejection, and even with a slight fainting fit; especially on being in any hot place, or after moving about considerably. 7. Vertigos, or swimings of the head, especially on bowing down and raising it up at once, and after sleeping. 8. Frequent pains of the head, to which the person was not formerly subject; and which seem not to arise from any defect in the digestions. 9. An evident sensation of heat, pretty generally diffused over the whole body. 10. A smarting sort of itching all over, from a very little more heat than usual. And lastly, frequent hæmorrhages, and these attended with manifest relief, and more vivacity.

People should, notwithstanding, be cautious of supposing an unhealthy excess of blood, from any one of these symptoms only. Many of them must concur; and they should endeavour to be certain that even such a concurrence of them does not result from a very different cause, and wholly opposite in effect to that of an excess of blood.

But when it is certain, from the whole appearance, that such an excess doth really exist, then a single or even a second bleeding is attended with very good effects. Nor is it material, in such cases, from what part the blood is taken.

§ 541. On the other hand, when these circumstances do not exist, bleeding is in no wise necessary: Nor should

it

it ever be practised in these following conditions and circumstances; except for some particular and very strong reasons, of the due force of which none but physicians can judge.

First, when the person is in a very advanced age, or in very early infancy. 2. When he is either naturally of a weakly constitution, or it has been rendered such by sickness, or by some other accident. 3. When the pulse is small, soft, feeble, and intermits, and the skin is manifestly pale. 4. When the limbs, the extremities of the body, are often cold, puffed up and soft. 5. When their appetite has been very small for a long time, their food but little nourishing, and their perspiration too plentiful, from great exercise. 6. When the stomach has long been disordered and the digestion bad, whence very little blood could be generated. 7. When the patient has been considerably emptied, whether by hæmorrhages, a looseness, profuse urine or sweat: Or when the *crisis* of some distemper has been effected by any one of these evacuations. 8. When the patient has long been afflicted with some depressing disease, and troubled with many such obstructions as prevent the formation of blood. 9. Whenever a person is exhausted, from whatever cause. 10. When the blood is in a thin, pale, and dissolved state.

§ 542. In all these cases, and in some others less frequent, a single bleeding often precipitates the patient into an absolutely incurable state, an irreparable train of evils. Many dismal examples of it are but too obvious.

Whatever, therefore, be the situation of the patient, and however naturally robust, that bleeding, which is unnecessary, is noxious. Repeated, reiterated bleedings, weaken and enervate, hasten old age, diminish the force of the circulation, thence fatten and puff up the body; and next by weakening, and lastly by destroying, the digestions, they lead to a fatal dropsy. They disorder the perspiration by the skin, and leave the patient liable to colds and defluxions: They weaken the nervous system, and render persons subject to vapours, to the hypochondriac disorders, and to all nervous maladies.

The ill consequence of a single, though erroneous bleeding, is not immediately discernible; on the contrary, when it was not performed in such a quantity, as to weaken the patient perceivably, it appears to have been rather beneficial. Yet I still here insist upon it, that it is not the less true

true that, when unnecessary, it is prejudicial; and that people should never bleed, as sometimes has been done, for mere whim, or, as it were, for diversion. It avails nothing to affirm, that within a few days after it they had got more blood than they had before it, that is, that they weigh more than at first, whence they infer that the loss of blood is very speedily repaired. The fact of their augmented weight is admitted; but this very fact testifies against the real benefit of that bleeding; since it is a proof, that the natural evacuations of the body are less compleatly made; and that humours, which ought to be expelled, are retained in it. There remains the same quantity of blood, and perhaps a little more; but it is not a blood so well made, so perfectly elaborated: And this is so very true, that if the thing were otherwise, if some days after the bleeding they had a greater quantity of the same kind of blood, it would amount to demonstration, that more reiterated bleedings must necessarily have brought on an inflammatory disease in a man of a robust habit of body.

§ 543. The quantity of blood which a grown man may part with, by way of precaution, is about ten ounces.

§ 544. Persons so constituted as to breed much blood, should carefully avoid all those causes which tend to augment it, (see § 540, No. 1) and when they are sensible of the quantity augmented, they should confine themselves to a light frugal diet, on pulse, fruit, bread and water; they should often bathe their feet in warm water, taking night and morning the powder No. 20, drink of the ptisan No. 1, sleep but very moderately, and take much exercise. By using these precautions, they may either prevent any occasion for bleeding, or should they really be obliged to admit of it, they would increase and prolong its good effects. These are also the very means which may remove all the danger that might ensue from a person's omitting to bleed, at the usual season or interval, when the habit, the fashion of bleeding, had been inveterately established in him.

§ 545. We learn, with horror and astonishment, that some have been bled eighteen, twenty, and even twenty-four times in two days; and some others, some hundred times*, in the course of some months. Such instances ir-

* From this shocking abuse of bleeding we are happily exempted in this country.

refragably demonstrate the continual ignorance of their physician or surgeon ; and should the patient escape, we ought to admire the inexhaustible resources of nature, that survived so many murderous incisions.

§ 546. The people entertain a common notion, which is, that the first time of bleeding certainly saves the life of the patient ; but, to convince them of the falsity of this silly notion, they need only open their eyes, and see the very contrary fact to this occur but too unhappily every day ; many people dying soon after their first bleeding. Were their opinion right, it would be impossible that any person should die of the first disease that seized him, which yet daily happens. Now the extirpation of this absurd opinion is really become important, as the continuance of it is attended with some unhappy consequences : Their faith in, their great dependence on, the extraordinary virtue of this first bleeding, makes them willing to omit it, that is, to treasure it up against a distemper, from which they shall be in the greatest danger ; and thus it is deferred as long as the patient is not extremely bad, in hopes that if they can do without it then, they shall keep it for another and more pressing occasion. Their present disease in the mean time rises to a violent height ; and then they bleed, but when it is too late ; and I have seen instances of many patients, who were permitted to die, that the first bleeding might be reserved for a more important occasion. The only difference between the first bleeding, and any subsequent one is, that the first commonly gives the patient an emotion that is rather hurtful than salutary.

Of Purges.

§ 547. The stomach and bowels are emptied either by vomiting, or by stools, the latter discharge being much more natural than the first, which is not effected without a violent motion, and one indeed to which nature is repugnant. Nevertheless, there are some cases, which really require this artificial vomiting : But these excepted (some of which I have already pointed out) we should rather prefer those remedies, which empty the belly by stool.

§ 548. The signs, which indicate a necessity for purging, are, 1. A disagreeable taste or flavour of the mouth in a morning, and especially a bitter taste, a foul, furred tongue

tongue and teeth, disagreeable eructations or belchings, windiness and distension.

2. A want of appetite, which increases very gradually, without any fever, which degenerates into a disgust or total aversion to food; and sometimes communicates a bad taste to the very little such persons do eat.

3. Reachings to vomit in a morning fasting, and sometimes throughout the day; supposing such not to depend on a woman's pregnancy, or some other disorder, in which purges would be either useless or hurtful.

4. A vomiting up of bitter, or corrupted humours.

5. A manifest sensation of a weight, or heaviness in the stomach, the loins or the knees.

6. A want of strength, sometimes attended with restlessness, ill humour, or peevishness, and melancholy.

7. Pains of the stomach, frequent pains of the head, or vertigos; sometimes a drowsiness, which increases after meals.

8. Some species of cholics; irregular stools, which are sometimes very great in quantity, and too liquid for many days together; after which an obstinate costiveness ensues.

9. A pulse less regular, and less strong, than what is natural to the patient, and which sometimes intermits.

§ 549. When these symptoms, or some of them, ascertain the necessity of purging a person, not then attacked by any manifest disease (for I am not speaking here of purges in such cases) a proper purging medicine may be given him. The bad taste in his mouth, the continual belchings, the frequent reachings to vomit, the actual vomitings and melancholy discover, that the cause of his disorder resides in the stomach, and shew that a vomit will be of service to him. But when such signs or symptoms are not evident, the patient should take such purging or opening remedies, as are particularly indicated by the pains, whether of the loins, from the cholic, or by a sensation of weight or heaviness in the knees.

§ 550. But we should abstain from either vomiting or purging; 1. Whenever the complaints of the patients are founded in their weakness, and their being already exhausted. 2. When there is a general dryness of the habit, a very considerable degree of heat, some inflammation, or a strong fever. 3. Whenever nature is exerting herself in some other salutary evacuation; whence purging must never be attempted in critical sweats, during the monthly

monthly discharges, nor during a fit of the gout. 4. Nor in such inveterate obstructions as purges cannot remove, and really do augment. Neither when the nervous system is considerably weakened.

§ 551. There are other cases again, in which it may be proper to purge, but not to give a vomit. These cases are, 1. When the patient abounds too much with blood, (§ 540) since the efforts which attend vomiting, greatly augment the force of the circulation; whence the blood-vessels of the head and of the breast, being extremely distended with blood, might burst, which might prove fatal on the spot, and has repeatedly proved so. 2. For the same reason they should not be given to persons, who are subject to frequent bleeding from the nose, or to coughing up or vomiting of blood; to women who are subject to excessive or unseasonable discharges of blood, &c. from the *vagina*, the neck of the womb; nor to those who are with child. 3. Vomits are improper for ruptured persons.

§ 552. When any person has taken too acrid, too sharp a vomit, or a purge, which operates with excessive violence; whether this consists in the most vehement efforts and agitations, the pains, convulsions, or swoonings, which are their frequent consequences; or whether that prodigious evacuation and emptiness their operation causes (which is commonly termed a *super-purgation*) and which may hurry the patient off; instances of which are but too common among the lower class of the people, who much too frequently confide themselves to the conduct of ignorant men-killers: In all such unhappy accidents, I say, we should treat these unfortunate persons as if they had been actually poisoned, by violent corroding poisons, (see § 533;) that is, we should fill them, as it were, with draughts of warm water, milk, oil, barley-water, almond milk, emollient glysters with milk, and the yolks of eggs; and also bleed them plentifully, if their pains are excessive, and their pulse strong and feverish.

The *super-purgation*, the excessive discharge, is to be stopped, after having plied the patient plentifully with diluting drinks, by giving the calming anodyne medicines, directed in the removal of acute pains, § 536, No. 6.

Flannels dipped in hot water, in which some Venice-treacle is dissolved, are very serviceable: And should the evacuations by stool be excessive, and the patient has not a high

high fever, and a parching kind of heat, a morsel of the same treacle, as large as a nutmeg, may be dissolved in his glyster.

But should the vomiting solely be excessive, without any purging, the number of the emollient glysters with oil and the yolk of an egg must be increased; and the patient should be placed in a warm bath.

§ 553. Purges frequently repeated, without just and necessary indications, are attended with much the same ill effects as frequent bleedings. They destroy the digestions; the stomach no longer, or very languidly, exerts its functions; the intestines prove inactive; the patient becomes liable to very severe cholicks; the plight of the body, deprived of its salutary nutrion, falls off; perspiration is disordered; defluxions ensue; nervous maladies come on, with a general languor; and the patient proves old, long before the number of his years have made him so.

Much irreparable mischief has been done to the health of children, by purges injudiciously given and repeated. They prevent them from attaining their utmost natural strength, and frequently contract their due growth. They ruin their teeth; dispose young girls to future obstructions; and when they have been already affected by them, they render them still more obstinate.

It is a prejudice too generally received, that persons who have little or no appetite need purging; since this is often very false, and most of those causes, which lessen or destroy the appetite, cannot be removed by purging; though many of them may be increased by it.

Persons whose stomachs contain much glairy viscid matter, suppose they may be cured by purges, which seem indeed at first to relieve them: But this proves a very slight and deceitful relief. These humours are owing to that weakness and laxity of the stomach, which purges augment; since notwithstanding they carry off part of these viscid humours generated in it, at the expiration of a few days there is a greater accumulation of them than before; and thus, by a reiteration of purging medicines, the malady soon becomes incurable, and health irrecoverably lost. The real cure of such cases is effected by directly opposite medicines. Those referred to, or mentioned § 272, are highly conducive to it.

§ 554. The custom of taking stomachic medicines
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infused in brandy, spirit of wine, cherry-water, &c. is always dangerous ; for notwithstanding the present immediate relief such infusions afford in some disorders of the stomach, they really by slow degrees impair and ruin that organ ; and it may be observed, that as many as accustom themselves to drams, go off, just like excessive drinkers, in consequence of their having no digestion ; whence they sink into a state of depression and languor, and die drop-fical.

§ 555. Either vomits or purges may be often beneficially omitted, even when they have some appearance of seeming necessity, by abating one meal a day for some time ; by abstaining from the most nourishing sorts of food ; and especially from those which are fat ; by drinking freely of cool water, and taking extraordinary exercise. The same regimen also serves to subdue, without the use of purges, the various complaints which often invade those, who omit taking purging medicines, at those seasons and intervals, in which they have made it a custom to take them.

§ 556. The medicines No. 34, and 35, are the most certain vomits. The powder No. 21, is a good purge, when the patient is no way feverish.

The doses recommended in the table of remedies, are those which are proper for a grown man, of a vigorous constitution. Nevertheless there are some few, for whom they may be too weak : In such circumstances, they may be increased by the addition of a third or fourth part of the dose prescribed. But should they not operate in that quantity, we must be careful not to double the dose, much less to give a three-fold quantity, which has sometimes been done, and that even without its operation, and at the risk of killing the patient, which has not seldom been the consequence. In case of such purging not ensuing, we should rather give large draughts of whey sweetened with honey, or of warm water, in a pot of which an ounce, or an ounce and an half, of common salt must be dissolved ; and this quantity is to be taken from time to time in small cups, moving about with it.

The fibres of country people who inhabit the mountains, and live almost solely on milk, are so little susceptible of sensation, that they must take such large doses to purge them, as would kill all the peasantry in the vallies. In the mountains of *Valais*, there are men who take twenty,

ty, and even twenty-four grains of glass of antimony for a single dose; a grain or two of which were sufficient to poison ordinary men.

§ 557. Notwithstanding our cautions on this important head, whenever an urgent necessity commands it, purging must be recurred to at all times and seasons: But when the season may be safely selected, it were right to decline purging in the extremities of either heat or cold; and to take the purge early in the morning, that the medicines may find less obstruction or embarrassment from the contents of the stomach. Every other consideration, with relation to the stars and the moon, is ridiculous, and void of any foundation. The people are particularly averse to purging in the Dog-days; and if this were only on account of the great heat, it would be very pardonable: But it is from an astrological prejudice, which is so much the more absurd, as the real Dog-days are at thirty-six days distance from those commonly reckoned such; and it is a melancholy reflection, that the ignorance of the people should be so gross, in this respect, in our enlightened age; and that they should still imagine the virtue and efficacy of medicines to depend on what sign of the Zodiac the sun is in, or in any particular quarter of the moon. Yet it is certain in this point, they are so inveterately attached to this prejudice, that it is but too common to see country-people die, in waiting for the sign or quarter most favourable to the operation and effect of a medicine, which was truly necessary five or six days before either of them. Sometimes too that particular medicine is given, to which a certain day is supposed to be auspicious and favourable, in preference to that which is most prevalent against the disease. And thus it is, that an ignorant almanack-maker determines on the lives of the human race, and contracts the duration of them with impunity.

§ 558. When a vomit or a purge is to be taken, the patient's body should be prepared for the reception of it twenty-four hours before-hand; by taking very little food, and drinking some glasses of warm water, or of a light tea of some herbs.

He should not drink after a vomit, until it begins to work; but then he should drink very plentifully of warm water, or a light infusion of chamomile flowers, which is preferable.

It is usual, after purges, to take some thin broth or soup during their operation: but warm water, sweetened with sugar or honey, or an infusion of succory flowers, would sometimes be more suitable.

§ 559. As the stomach suffers, in some degree, as often as either a vomit or a purge is taken, the patient should be careful how he lives and orders himself, for some days after taking them, as well in regard to the quantity as quality of his food.

§ 560. I shall say nothing of other articles taken by way of precaution, such as soups, whey, waters, &c. which are but little used among the people; but confine myself to this general remark, that when they take any of these precautionary things, they should enter on a regimen or way of living, that may co-operate with them, and contribute to the same purpose. Whey is commonly taken to refresh and cool the body; and while they drink it, they deny themselves pulse, fruits, and fallads. They eat nothing then, but the best and heartiest flesh-meats they can come at; such vegetables as are used, in good soups, eggs, and good wine; notwithstanding this is to destroy, by high and heating aliments, all the attemperating cooling effects expected from the whey.

Some persons propose to cool and attemperate their blood by soups and a thin diet, into which they cram craw-fish, that heat considerably, or *nasturtium*, cresses, which also heat, and thus defeat their own purpose. Happily, in such a case, the error in one respect often cures that in the other; and these kinds of soup, which are in no-wise cooling, prove very serviceable, in consequence of the cause of the symptoms, which they were intended to remove, not requiring any coolers at all.

The general physical practice of the community, which unhappily is but too much in fashion, abounds with similar errors. I will just cite one, because I have seen its dismal effects. Many people suppose pepper cooling, tho' their smell, taste, and common sense concur to inform them of the contrary. It is the very hottest of spices.

§ 561. The most certain preservative, and the most attainable too by every man, is to avoid all excess, and especially excess in eating and in drinking. People generally eat more than thoroughly consists with health, or permits them to attain the utmost vigour, of which their
natural

natural constitutions are capable. The custom is established, and it is difficult to eradicate it: Notwithstanding we should at least resolve not to eat, but through hunger, and always under a subjection to reason; because, except in a very few cases, reason constantly suggests to us not to eat when the stomach has an aversion to food. A sober moderate person is capable of labour, I may say, even of excessive labour of some kinds, of which greater eaters are absolutely incapable. Sobriety of itself cures such maladies as are otherwise incurable, and may recover the most shattered and unhealthy persons.

C H A P. XXXIII.

Of INOCULATION.

SECT. 562.

INOCULATION is performed by putting a little matter, taken from the ripe pustules of a person in the small-pox, into a small incision made in the skin of one who has never had this distemper, by which means the distemper is communicated to him.

§ 563. This method has been practised time out of mind in China and the East-Indies: It is used for these many ages in Georgia and Circassia; it was introduced an hundred years ago to Constantinople, and many provinces of Africa have adopted it long ago. Some countries in Europe even have practised, without knowing how long since, methods of inoculation which do not differ from the method used now a-days, but by the manner of inserting the venom of the small-pox. In short, this method was brought to England 55 years ago, by the EMINENT LADY WORTLEY MONTAGUE. She was an eyewitness of the success it had in Constantinople, where her husband resided as ambassador.

From London inoculation spread through England and the colonies in America, and it has been tried with success in most of the states of Europe: It has met with opposition in all of them. This was always the fate of every new useful invention. In some states, inoculation has overcome all difficulties and is firmly established; in others

it staggers yet, it has been rejected in some, after having been cried down through imprudence. It is from time alone, which gets the better of prejudice, that we must expect to see this method universally established.

§ 564. It seems at first very strange to think of giving to a person in good health a distemper; and without doubt, very strong reasons must induce us to take that course. These reasons proceed from the characters of the small-pox, the circumstances which have an influence on the issue of that distemper, and the success of inoculation.

§ 565. The characters of the small-pox, which prove the usefulness of inoculation, are, first of all, its generality. The greater part of mankind have this distemper once in their life-time; of those who have attained the age of maturity, there is not the fifteenth part of them that have escaped it. Secondly, those who have the small-pox once, have them not a second time. I know some examples of the contrary are given, but they are so very rare, that they do not make almost one exception from the general rule. Thirdly, the small-pox considered in general, is a distemper very dangerous; and if it is very favourable in certain times, and to many people, it is fatal to others, and in other times. Exact calculations have demonstrated to nice observers, and will demonstrate every where, and at all times, to all those who are capable of understanding any thing of demonstration, that hitherto this distemper used to kill at least the seventh part of the persons that it attacked; and we know, that many of those who escape, remain disfigured, lame, or sickly, the rest of their life.

§ 566. The adversaries of inoculation (for inoculation has its adversaries) have pretended to invalidate the truth of these propositions. My present purpose will not allow me here to shew the sophistry of their arguments, but I boldly appeal to the testimony of the public voice, and the real sentiment of every individual, who has not yet been prepossessed against this subject, and whose mind has not imbibed false prejudice, or whose conscience is not alarmed by chimerical scruples. He who has not had the small-pox, dreads it, because he knows that every individual must have it, and that it is dangerous; he who has had it, dreads it no more, because he knows that no body has it twice.

§ 567. If the small-pox was always favourable, inoculation would be of no use; if it was always fatal, no body would have ventured to inoculate: The small-pox has been sometimes very favourable, at other times very fatal, the circumstances of this difference have been observed; from thence it has been concluded, that by giving the small-pox in the circumstances in which it was favourable, the danger thereby would be avoided. This reasoning was very exact, and the event has justified it.

§ 568. The parallel between the natural small-pox, and the small-pox by inoculation could not be better established, than by comparing the registers of two hospitals appointed; the one for the natural small-pox, and the other for inoculation, and this has been done at London. The account of the registers for the space of twenty years shews, that, in the hospital for the natural small-pox, of nine patients two of them die, and in the hospital for inoculation, of 345 patients, there only dies *one*.

It is very true, that the small-pox is not every where so deadly as in that hospital, and with regard to this, we must stand to the observations of Messrs. JURIN and SCHEUZER, and establish according to their accounts of several bills of mortality in towns and in country, that of 13 persons who have the natural small-pox, two of them die; thus the proportion betwixt the number of the dead and the patients in the natural way, being as two to thirteen, and by inoculation, as two to 690, the advantage that inoculation has over the natural small-pox is determined by the proportion of 690 to 13, or $53\frac{1}{3}$ to 1; and I am convinced, that this calculation is yet below the real advantages of inoculation, under the direction of able physicians, who are the only persons that are capable of conducting it with knowledge of the cause: but I have thought I should make that calculation on this footing to avoid all reproach of prepossession. There occurs as yet, besides, an advantage weighty enough to be decisive; and it will be sufficient, without doubt, to every father of reason and sense, to know that the hope of preserving his child by inoculating him, is, to that of preserving him by waiting for the small-pox in the natural way, as $53\frac{1}{3}$ to 1, so that he ought not to hesitate on the course that he should take. It will be sufficient for a prince to know that of 690 of his subjects, there will die at least 106 of the small-pox; and that, if they were inoculated, there would not die but two of the said number; this ought to

determine him to encourage inoculation : The saving of 164 persons lives will certainly appear to him an object not to be neglected, if he truly deserves the title of father of his people.

Though we were to admit of the proportion the most unfavourable to inoculation, which has been found in Scotland, viz. that of one dead out of 164, inoculated ; tho' we were to diminish a little the mortality of the natural small-pox, which the good method of treating, now become more general, may in effect diminish a little, and though we were to reduce it to 1 in 10 instead of 1 to 7, still the saving would be always of 15 out of 164, and 64 out of 690.

It must not be forgotten in weighing the advantages of inoculation, that the danger of death is not the only bad effect, as I have said already, that attends the small-pox ; it leaves sometimes more fatal consequences than death itself ; and the advantage of inoculation, with regard to this, follow a proportion yet more considerable than that which I have just established with relation to mortality.

§ 569. A large volume has been published, which may be called the martyrology, or even the necrology of inoculation, in which are collected carefully, all the accidents that have happened in consequence of inoculation, or after inoculation ; for that distinction, so necessary, has not been made. The works of the inoculators have furnished almost all the materials of this book, at which none must be frightened, though it appears designed to produce that effect ; it only proves, that inoculation does not entirely take away the danger of the small-pox, and no sensible inoculator has ever said so ; none but an enthusiast could say it, for inoculation has enthusiasts as well as enemies : But it does not invalidate, in the least, the truth that I have established, it diminishes it extremely ; a truth irresistably demonstrated, and of which the inoculators almost no longer take notice : The building, if I may say so, is ended ; and we see without fear the different storms that can attack it, but none can destroy the fabric.

Nothing but the blunder or ignorance of the inoculators can hurt it ; for as I have said before, and repeat more positively, inoculation is like all human operations ; we cannot expect an happy success from them, unless they are performed with prudence, and by skilful hands. It is not enough to inoculate, in order to remove the danger of the small-

small-pox, inoculation must be done properly, without which the only advantage reaped from it is, on the one hand, the application of the pocky matter to the arm or the leg being without danger, and, on the other, the natural small-pox, the matter being carried by the air or saliva, and lodged in some internal organ, being very dangerous, the cause of this danger is avoided by inoculation; and the removal of this cause, which is of great consequence, and which often happens, has given inoculation considerable advantages over the small-pox in the natural way, even when it has been performed without care and preparation. But there remain so many other causes, that it is not surprising if inoculation ill performed, that is to say, performed without removing these other dangerous causes, proves so fatal. Therefore, all the secret in inoculation consists in knowing these causes, and shunning them all, as far, at least, as it is possible for the limited knowledge of man. In inoculation two things are to be considered, the choice of a subject of a sound constitution, and naturally ready for receiving the small-pox; and the preparation of a person who is not so.

§ 570. The rules which direct in this choice, and in this preparation, are founded on the observations which have indicated what were the dispositions of the subjects who had the small-pox in a favourable way, and of those who had it in a malignant manner.

When persons are sound, and there are several, in whom all the favourable dispositions are combined, without the participation of any of the unfavourable ones, these persons are prepared naturally.

There are others who only have some of those dispositions; the inoculator employs, in order to procure them to them, the remedies which experience has demonstrated to be efficacious in the like cases; and as the knowledge of these fatal dispositions, and the means of preventing them, supposes a knowledge of every branch of medicine, consequently none but physicians are capable to declare a subject fit or unfit for inoculation, and to regulate the preparation.

When the indispositions that might have rendered the small-pox dangerous are removed, when the subject has acquired the physical dispositions necessary for the happy success, then he is prepared.

Those

Those to whom the inoculator thinks he cannot communicate, by any means, these dispositions, are subjects absolutely unfit; and they ought not to be hurried into a distemper which in all likelihood must prove fatal. Inoculation ought not to be considered as a remedy. It has sometimes happened that the small-pox has been so, and has recovered weakly persons; but we cannot foresee this effect with sufficient certainty to make it a motive, and to run the risk of it. Such imprudent actions were the cause of the first misfortunes that attended inoculation, and they continue to discredit it. It was used for the cure of an hectic past recovery, it hastened his death, and the blame was laid on inoculation.

§ 571. The causes that render the small-pox fatal, may be included under some principal heads.

1. The age. The small-pox is the more favourable, other circumstances being equal, the younger a person is who labours under that disease; age increases the danger. However, old men have had that distemper in a very gentle way, and inoculation has been used with success, from the age of three months to sixty-two years.

2. The complication of other distempers, either acute or chronical, under which I include for the women the time of the menses, of their being with child, and their lying-in; and for every person the use of certain remedies, which being taken before the small-pox, have appeared to render it fatal.

3. The air. It is certain, that there are places where it is more fatal than in others; the seasons extremely hot and extremely cold increase the danger, if the small-pox is any-ways unfavourable; for all seasons are equal to a slight small-pox. Sometimes there rage other epidemical distempers, very general, which being complicated in some cases with the small-pox, increase greatly the danger.

4. Fear. Every body knows that this impression renders every disease worse; and when this distemper is dreaded, this sentiment increases with age, and is accompanied with the most fatal influence, if a person is attacked by it, in a time when it is malignant, when he is not in good health, when the circumstances are unfavourable, or if he is absent from the only physician in whom he trusts. The grief of being seized with it, in a time where it would be of great consequence to transact business

ness that admits of no delay, may likewise aggravate it considerably.

5. The want of good advice, and too many bad advisers.

§ 572. You see, by what I have been saying, since so many circumstances can render the small-pox fatal to a person, who at other times might have had it in a favourable way, that the great advantage of inoculation consists in using it in a time when none of these circumstances exist; so that this operation must be performed at the very moment when no unfavourable circumstance appears.

§ 573. With regard to the age, the children may be inoculated either the very first months of their lives, before the teething begins, a method used in Asia, in some parts of England, and approved of by very great physicians; but I have some doubts against it, which have prevented me from trying it; or from the time that the children have got their first twenty teeth, till the age of twelve or thirteen years, or even later, if it has not been performed before that time. But it is improper to inoculate girls from that age, or rather from the commencement of the critical period of puberty, till such time as the menses have appeared, and are firmly established, which is sometimes very long. Though this period is less perceptible in boys, yet it has also relation to them, and is accompanied in them with pretty clear symptoms; therefore it is prudent, for certain subjects, not to inoculate in that period of life.

As to health, the time must be taken when the subject is in very good health, without having, however, that degree of strength which in the moment that one is about to be attacked by an inflammatory fever, is a hurtful disposition, which ought to be rectified by preparation.

In regard to the air; the time must be chosen when the season is the most temperate; and in this country the beginning of the autumn, or rather the end of summer, seems to me to deserve the preference, because children are generally in better health than in the spring. The plenty of air they have enjoyed, the great exercise they have taken, the fruits they have eaten, give them a disposition more favourable than that which they have at the end of winter, a period in which they are often sickly, and require therefore more preparation than in the autumn.

If

If people live in a country where the small-pox is constantly bad, it is to be presumed that this depends on an inherent defect of the air; to obviate this they must go elsewhere to inoculate.

Inoculation ought not to be used in the same place where there rages an epidemical distemper of a very deadly small-pox.

If there is any other epidemical distemper, one ought to consider whether it attacks children; if it does not affect them, one may boldly inoculate; if it does affect them, inoculation must be delayed, or they must be carried elsewhere; but if it cannot be deferred, or if they cannot be carried elsewhere, one ought to join to the preparation, which their constitution requires, the helps pointed out to prevent the epidemical distemper.

When the epidemical distempers are very general, when there are many of different kinds, and when the number of the sick denote the unwholesomeness of the air, inoculation ought not to be used; I have not ventured to inoculate in this spring, 1766.

§ 574. After all that I have said, what remains for me to say on the preparation is very short, because, I repeat it, I do not pretend that parents themselves should inoculate their children, such an undertaking would be very rash in them to attempt; my only aim is to shew them the utility of this method, by reasons taken from the very nature of things, and experience, to point out to persons whose vocation it is to direct it, and who have not practised it yet, the principal objects to which they ought to attend.

§ 575. When the subjects are of the most favourable age, from three to ten or twelve years, and healthy, a diminution of diet, and choice of food neither very nourishing, fat, salted, nor acrid, for the space of a fortnight or three weeks; abstinence from wine and coffee, if they have the misfortune at that age to be accustomed to them; luke-warm baths during that time for the legs, or even, if they do not appear to have a flexible skin, the body five or six times bathed; and, in short, a dose of physic the eve of the operation; the whole preparation consists in these things. The choice of the food is chiefly not to give them but very little animal food, and only such meats as are light, but to make them chiefly live on vegetables or fruits, and not to allow them to drink any thing

thing but water, milk mixed with water, or whey. You may look back on what I have said in § 220, on the suitable preparation for having the small-pox in the favourable manner.

When the child is very stout, and appears full of blood, he ought to be bled once or twice, take nitre morning and evening during the preparatory course. These precautions are necessary to prevent the inflammation, which the infectious matter of the pox produces easily in stout bodies.

When I recommend a low diet, I do not mean that it should be carried too far: The child after the preparation ought to be lighter, more chearful, but he must not lose his strength. By reducing children too low, their health has been impaired, and their stomach spoiled.

I shall not describe here the signs of good health, they are known by the judges of inoculation; I shall only say, that when I found children chearful, with a regular appetite, sleeping well, having a sweet breath, regular in their belly, and whose skin easily heals, when it is incised, such persons I have inoculated boldly.

§ 576. When the child proposed to be inoculated is not in a good state of health, the first thing to be done, is to restore him to health, before it be examined whether he should be inoculated. But, if the means which are employed for that do not particularly concern inoculation, they belong to practical medicine in general, and suppose an exact knowledge of it.

One difficult case occurs; when the child belongs to a family that has always had the small-pox in a deadly manner, and of which many brothers and sisters have died. Before such a child be inoculated, the cause of the danger must be well ascertained, and this examination is very nice; perhaps even it is impossible to find it out, if the inoculator has not had an opportunity of observing the distemper of one of those who died. When once this cause is discovered, the remedies that it requires to obviate it, must be applied; and often they are very contrary to the cooling regimen of the usual preparations for children.

§ 577. I should now say something about the operation itself. Two incisions are made in the skin, one in each arm, or one in each leg, but I prefer the legs; the length of each incision about 15 or 16 lines. The operation is performed

performed with a lancet, or I would rather chuse a very sharp bistoury. The incision ought to be very superficial, and a slight appearance of the blood issuing forth is sufficient; when then there is an effusion of pure blood, the operation has not been so well performed.

We introduce a thread impregnated with the variolous matter into this incision, which is covered with a plaster of diapalma, tied on with a compress and bandage, in such a manner as not to shift. It is left on for 24 hours, 36, or 48; as you please. When the thread is taken away, if the suppuration of the wounds is any way considerable, it must be dressed with a little lint; if it be not considerable, none is put till it becomes so; but we apply again the plaster with the compress and bandage, and we continue this simple dressing every 24 hours, as long as the wounds suppurate, a period which varies much.

To have the proper thread for introducing into the wounds, and which is the cause of this distemper, it must be pliant, folded in several doubles, and slightly twisted. It is dipped in the infectious matter by drawing it several times through many large and full ripe pustules of a good small-pock, in a subject very sound in constitution; the pustules being opened with a needle, or scissars. When the thread is properly impregnated, you wrap it up in a little writing paper, and preserve it in a box very close. I have used a thread very successfully 26 months after it was infected; I have used some 8 or 10 months old, and have found them good, but in general it is better they are not above three or four months old.

§ 578. After the operation, the child continues for some days in very good health; he is allowed to eat as when under the preparation, and he is not confined to the house, if the weather is good. When children are very young, care should be taken, that none of these accidents happen to them, occasioned by falls or strokes, to which they are subject by their natural vivacity and weakness. Such misfortunes in this occasion might prove more fatal than at other times.

Sometimes on the fourth, more usually on the fifth or sixth day, a pain is felt under the arm-pit, if the inoculation was performed in the arm; or in the groin, if the inoculation was in the leg, attended with a slight inflation in the glands of these parts, which seldom lasts two whole days, and which is a certain proof that the patient will have the

the small-pox. Sometimes the infection takes place with this pain, but I never see it fail, where this pain has preceded.

The sixth, the seventh, or the eighth day, sometimes even later, the inoculated persons begin to be weary, dejected, restless, spiritless, and if they are very young, drowsy; they have somewhat of a fever, a head-ach, are sometimes thirsty; then they stay within doors, and have no inclination to go abroad; from that period nothing is administered to them but oat or barley gruel, or the regimen prescribed in § 37, and 38, and that they make them drink a light infusion of some proper herbs, as flowers of the elder, linden, borage with a little milk; or, if they have a reluctance to such drink, they may have plain water and milk; if they don't like milk, water with a little syrup, or even pure water, if it be good, may be drank.

At this period, the patient sweats much, and after 48, 60, or 72 hours of this uneasiness, the first eruption appears, and generally on the face; the moment they appear the patient is much better, the eruption continues, he becomes still easier, and often the second day, the fever ceases and the appetite returns. Then there may be added to the food I have mentioned a little bread, but this regimen ought not to be given over till the greatest part of the pustules are dried up: Then the patient is purged, they give him a little meat, and by degrees he returns to his usual way of living.

§ 579. When the fever is any-ways strong at the beginning, and above all if it is attended with head-achs, inclination to sleep, or pains in the reins, an injection is given. A stronger degree of the fever in a stout child, or in an adult, requires bleeding, several injections, bathing the legs in lukewarm water, nitre, emulsions, &c. these helps abate it very quickly.

Below three years, very seldom above, children have sometimes one or two convulsion-fits at the approach of the eruption; but they need no particular help.

§ 580. The usual number of pustules is between 50 and 400. I have seen several times many less than 50, and three or four times as many as in the distinct small-pox when very numerous.

When there are fewer than 50 pustules, the time of the suppuration occasions no sensible frequency in the pulse;

pulse; if there are more, the patient has generally a little fever and uneasiness, during some hours; an injection is a quick remedy.

When the number of pustules is very considerable, the suppuration fever has the same symptoms as in the distinct kind when very numerous; but, however, when the number of pustules is equal, as far as one can guess, this fever is not so strong as in the natural small-pox, because the same number of pustules does not produce such a strong irritation on a body which is softened by preparation, as on another. Some injections, a little manna, cassia, or tamarinds, are a very proper remedy, and in this case the directions in § 214, ought to be followed, and the pustules should be opened, as I have advised in the natural small-pox in § 216. In general, the inoculated small-pox is to be conducted as the natural, from which it differs only in degree.

§ 581. This is all I think proper to say in this performance on this operation, on which I have dwelt very long elsewhere; and I shall handle this subject in a fuller manner, in the second edition of *Inoculation Justificæ*.

Since twelve years of practice in inoculation, I have not one single patient in the smallest degree of danger, nor one that has had any bad consequences; every one, on the contrary, appeared very happy for having been inoculated.

Inoculation has been used much seldomer, but with the same success, in Zurich, Berne, Basil, Neufchatel, Winterthour, and in almost all the towns of this country.

The more I practice it, the more I am convinced of all its advantages, and the futility of the objections of its opponents. To condemn it because it does not entirely take away all the danger of a very cruel disease, is want of good sense; to condemn it, or discredit it, because it has been ill applied by blunderers and ignorant persons, is unequitable, it is yielding to a spirit of party always blind and maleficient.

§ 582. Let me be allowed to bring in here, a comparison, that I made use of in a performance which appeared six years ago (*Letter to Mons. de Haen*) and which was approved by very good judges.

‘ An irrevocable fate subjects all the inhabitants of a country to cross, once in their life, a plank very narrow, under which runs a deep, rapid, and impetuous torrent.

‘ The

“ The experience of ten ages shews, that of ten persons
“ who cross, there is at least one who falls and is
“ drowned; without speaking of those who fall and who
“ can be saved, but who having been bruised against the
“ rocks, with which the channel of the torrent is full, re-
“ tain often, during all their life, infirmities which make
“ them envy the fate of those who perished.

“ The same observations which have proved the danger
“ of this passage, have shewn the causes that render it so
“ dangerous; many have been seen to fall through the fear
“ of falling; others, because they were too heavy, and
“ gave to the plank false movements; some because, when
“ they were crossing, they were seized with a dizziness,
“ faintness, or epileptic fits; others, because the plank
“ was covered with ice; many were tumbled down by a
“ violent storm; several perished because they had under-
“ taken the journey in the night-time; many women with
“ child fell on account of the difficulty of keeping their
“ body in an equal balance, and of seeing the part where
“ to place their feet; a great number were the victims of
“ the advices given to them by well-meaning and ignorant
“ persons, for there are many of that kind.

“ One of these inhabitants reflects and says, “ Since
“ the passage is not necessarily mortal, and as the acciden-
“ tal circumstances alone render it so dangerous; since
“ we all must cross, and when once we have crossed, it is
“ very rare to cross a second time; let us firmly lay down
“ as a rule, that every one of us shall perform the pas-
“ sage in a fixed period, when there are no unfavourable
“ circumstances: 1^{mo}, Before the danger is known; 2^{do},
“ Before the body becomes too heavy; 3^{tio}, In a
“ period when nothing is to be feared in the journey from
“ a fit of sickness; 4^{to}, When there is no ice on the
“ plank, and when there is no storm; 5^{to}, In plain day-
“ light; 6^{to}, Women shall always cross before they are
“ capable of child-bearing; 7^{to}, Every one shall cross
“ under the direction of a skilful guide, who shall deter-
“ mine the time of this passage.” Every person of sense,
“ every good citizen, will see the utility of this plan, they
“ will put it in execution, and will find it attended by the
“ most happy success, and that, instead of one tenth of
“ the passengers perishing, there does not perish one of
“ 200. This being the case, can it be thought that any
“ reasonable father, who loves truly his children, should

‘ imagine he ought not to fulfil a duty, and follow the
 ‘ dictates of a well-placed affection, by making them cross
 ‘ the plank at a favourable period, at the risk of one in
 ‘ two hundred, rather than to wait till chance brings them
 ‘ there at the risk of one in ten ?’ If this comparison is
 just, I think it is difficult to resist the consequence.

Of Inoculation for the Measles.

§ 583. I have said before in § 229, that inoculation has been used for the measles, and I am to speak here of this method, for which we are indebted to Dr. Francis Home, a famous physician in Edinburgh, where the measles are often very fatal, and where even when they are thought pretty mild, carry off the twelfth part of the patients.

Dr. Home hoped by inoculating, *1mo*, to diminish, and even absolutely to remove, the mortality ; *2do*, to prevent the cough, which torments cruelly the patients, and which is occasioned by the first impression of the venom made on the lungs, where it is introduced with the air ; *3tio*, to prevent sore eyes, and other fatal consequences which the measles too often leave after them. He has had the pleasure to see the event answer his expectations.

§ 584. As there is no matter in the measles, Mr. Home has used the blood itself in order to convey them ; for that purpose, he makes a very slight incision in the skin of a person in the measles, in the part where the greatest numbers of measles are, and in the time, when they are at their greatest height, he dips a little cotton in the blood when it runs ; and it is this cotton he uses, in order to give the measles. He makes two incisions as in the small-pox, but a little deeper, because he will have them to bleed, and he lets them bleed for a quarter of an hour before the cotton is applied. This being done, the dressing is performed in the same way as in the inoculation of the small-pox, with this small difference, that the cotton is left three days before it is taken away ; but I am apt to believe, that leaving the cotton so long, and the depth of the wounds, are superfluous.

§ 585. Dr. Home performed his first inoculation the 21st of March, 1758, on a child of seven months old, who had many eruptions on the head, and even on the
 whole

whole body, and a running behind the ears, but who in other respects was in good health : he inoculated him with cotton that had been dipped two days before.

The child began to be sick the 27th, which was the seventh day after the operation ; he had a little fever, heat, uneasiness, sneezed often, did not cough in all but six or seven times, and had not sore eyes. The eruption began the 29th, and dried up the third of April, the skin was perfectly healed, and the child was in very good health.

§ 586. A sequel of other observations informed Dr. Home, 1st, That the blood ought not to be kept above ten days ; by that time it seems to have lost its force ; 2d, That the time when the *virus* begins to take effect, is the sixth or seventh day ; that period appears more fixed than in the small-pox : 3d, The inoculated measles is much milder than the natural ; none dies of it ; the fever, the inflammation, the uneasiness do not come to such a high degree ; many patients have no cough at all, others cough but very little, and the patients have none of these languishing distempers which so often come on after the natural measles. Tho' there is much sneezing, and tho' there is sometimes great running from the eyes during the height of the distemper, they go entirely off when the measles are dried up.

The wounds don't suppurate so long as in the inoculated small-pox.

§ 587. We see, by all that has been said, that in the countries where the measles are fatal as in Scotland, it is an incumbent duty to inoculate. In those parts where it is more mild, the introduction of this practice is less necessary ; but it would be likewise very useful, since it spares children a very fatal cough, and all the consequences to which they are exposed in every country.

§ 588. As the great danger of the measles proceeds from the inflammation of the lungs, as this inflammation depends on the venom lodged on this organ, and as the effect is prevented by applying this venom upon the exterior part, it is visible that inoculation draws here its greatest advantages from itself, without standing so much in need of those which arise from preparation, as the small-pox. One ought not, however, to lose sight of them ; but as this preparation is founded on the same principles as that for the small-pox, it is needless here to repeat what I have said before.

C H A P. XXXIV.

Of Languid, Lingering, or Chronic Diseases.

S E C T. 590.

I Do not propose to treat of lingering, or chronic diseases. In this chapter, I design only to give some directions, which in certain cases may prevent their formation, and in others stop their progress, or diminish their symptoms.

§ 591. Lingering diseases have several different causes, and the same cause produces very different distempers, according to the part it attacks. There are few parts in which stones have not been formed, or which have not been found schirrous; but the stones and the schirrous produce symptoms very different in the lungs, the liver and reins. I shall not examine all these causes: I shall only say a few words concerning some of those which are the most frequent, and some of the diseases the most common.

§ 592. Some persons are born with a very weak delicate constitution, which they retain all their life; they have no strength, they are never well, because being extremely susceptible of every impression, the slightest causes make them ill. The least mistake in the quality or quantity of the food, change of weather, a small degree of fatigue, the smallest alteration of their sleep, the slightest trouble of mind, produce immediately a considerable alteration in their health; and without having any particular distemper, they are never well.

§ 593. The manner of bringing up children, may greatly contribute to repair this defect of their native constitution, and children born very tender may be rendered very healthy. I perhaps shall some day give to the public the result of a great number of observations on this important subject; I shall now confine myself to what I have said on this subject in Chap. XXVII.

When art has not sought out methods, from the most early period of infancy, to give strength which nature has refused, and this often happens, because instead of seeing that children are only weak, it is thought they are sick; they are treated as such, and they are weakened by remedies, it is most difficult, nay almost impossible to procure to them a tolerable degree of health.

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The most useful advice that I think ought to be given to persons in this case, is to shun the rock on which almost every one splits, *viz.* the hope of being cured by remedies. Weakness opens the door to all infirmities, people seek to combat them all successively, and that often by very opposite remedies, the only certain effect of which weakens them daily more, thereby the number of their complaints is augmented, and they are often reduced to a most dismal situation. Blood-letting, emetics, and purgatives are to them very destructive, since their only aim, with regard to their health, ought to be to increase their strength, which these remedies impair. They cannot expect to succeed but by gentle methods, continued for a long time, and by attention to the diet rather than by remedies.

Sobriety ought to be their chief law. Weak organs, whose action is always languid, cannot digest much, nor waste much. If their food is above their strength, they are over-loaded, and become sick. Not only they should content themselves with a very small quantity of food, they should likewise choose it plain, and the least mixed that is possible. The best bread, tender meat, either roasted or stewed with very little water, but never boiled, new laid eggs, milk, if their stomach digests it, fish, craw-fish, ought to be the basis of their food. There may be added to them daily some vegetables or some fruits, but rather as a seasoning than a food, and only as much of them as to prevent a loathing, and to shun the danger of a diet entirely composed of meat, or at least of animal food.

Food that is fat, salted, smoked, hogoed, viscid, doughy, is above the strength of their stomach, and their other organs. Acids weaken them.

They ought not to drink too much, for that would increase their weakness. Pure water is the drink that suits them best. If they live in places where the water is bad, they may rectify that by some gentle bitter ptisan; that from the juniper root may be used, instead of all others. All infusions drank hot, though never so much extolled, and all *liqueurs*, under whatsoever names they go, are hurtful to them though differently. Wines which are neither acid, spirituous, but oily, nourishing, strengthening, taken from time to time in a small quantity, are the only artificial liquids they ought to drink.

Their supper ought to be very light, they ought to go to bed betimes and rise early; nothing contributes more efficaciously to repair strength. They

They ought to shun being in a place, where the air is hot and confined ; inaction is death to them, and next to sobriety, the two efficacious means of health to them, is to live much in an open air, and stir much about, without however fatiguing themselves too much at once. All games of exercise, country labour, airing on horseback, are very salutary to them.

I know, that often such persons dread the air, live confined, and make use of a very close room, a grave in which they vegetate very miserably ; wrapped up with furs from one end of the year to the other, living on soups only, and drinking nothing but warm water. They will storm at hearing me propose this regimen ; but all I beg of them is to pluck up courage to make this trial, and I shall venture to assure them, that, in a few weeks, they will never leave it off.

Few remedies are necessary to them. If their stomach is uneasy, they may take three or four times a year a little rhubarb, and in the intervals they may frequently use the filings of iron, or rather of the powder No. 54, Peruvian-bark, mineral steel waters for a long time, but in small doses : Cold baths may likewise be sometimes very serviceable to them. This is the same regimen I have pointed out for those who have a catarrh in § 135.

§ 594. I have supposed in the preceding article, that these children were only weak. If the weakness is the effect of a corruption of the fluids, if they have been formed and nourished by a tainted blood, the most sober and regular way of living is absolutely necessary to them. But this method alone cannot cure them. Very early, and the first week of their childhood, if there are found, and this happens frequently, signs or symptoms which denote the particular taint of their fluids, the fittest and best remedies must be used. The success of the remedies is so much the more to be depended upon, the sooner they are given : it is easier in that period of life to remove the cause of the ailment ; and besides, though some years afterwards you were sure of removing it, its action, during the first years of the life, impairs unavoidably the health, and from thence result fatal consequences, sometimes irreparable. I think, I am bound in duty to give here this advice to parents, honest enough to own to themselves, and to a good and skilful doctor, their faults or their misfortune, that they may not sacrifice the health and hap-
piness of their children to the cure of a disease.

pineness of their children to a false shame. But I cannot enter into any detail, an abridgment would not suffice, and people who do not practise physick, are not capable of understanding these matters.

§ 595. Persons born strong, may fall into the greatest weakness by several reasons. Repeated attacks of acute diseases : hemorrhages too plentiful, and on that account even frequently bearing children, miscarriages, considerable wounds, excess in every degree, long fatigue, a continuation of grief, a long use of bad food, living long in bad air, have often reduced the stoutest persons to the state of weakness that I have mentioned ; and this requires the same care and attention pointed out in § 593 : But we have much more hope to succeed, than if the weakness is a distemper born with us.

§ 596. The disorder of digestion, or the weakness of the organs operating that function, is, next to the general weakness, one of the principal causes of lingering distempers. If people but consider, that the stomach is the part which suffers immediately from all the errors committed in the quantity, quality, mixture of meats and drinks, errors which are numberless, and from which hardly any is free, every body will comprehend how easily it is disordered : If we reflect on the importance of its functions, we shall soon understand the fatal consequences that must attend this disorder. The disorders of the stomach are fatal to health, but they are not all of the same kind, nor do they all arise from thence ; there are some very opposite to others, and the general advices that may be given with any certainty, are reduced to a very small number.

It is in this case that the observation of a regimen is the most important. The regimen cannot be too plain ; the most exact mastication must diminish the work of the stomach. All those who have a weak stomach, ought not to eat any food that is fat, salted, smoked, hогоed, doughy, viscid ; they ought besides that avoid eating those which they have remarked to have been detrimental to them. They should eat but very little, and never eat till they are sensible that the last things they eat are entirely digested. Water ought to be their only drink, and above all they ought to restrict themselves to very little supper. I shall repeat this advice more than once in the chapter, and I cannot repeat it too often, because it is of the greatest importance, not only in particular distempers of the or-

gans of digestion, but also in the greatest number of the lingering diseases, which disorder them always more or less, and which affect also the sleep. In this case, a too heavy supper is productive of two evils: 1st, there is no digestion; 2dly, it disturbs the sleep; from thence arise all the evils which result from bad digestion, and bad sleep, restlessness in the night-time, fever, head-ach, and the next day uneasiness, weakness, whereby even the evil is encreased; whereas a supper adapted to the weakness of the stomach is easily digested and affords a quiet sleep; and as good digestion and good sleep are the two great means of reparation that nature has given to men, every body is sensible of the importance of preserving them as much as possible.

§ 597. Not only acute diseases enfeeble, and if they are frequent, render valetudinary, but they likewise throw one into the chronic distempers, the most characterised, by producing in the body these disorders which occasion them. This happens as I have said in § 25, or when the disease has been neglected in the beginning, or when it has been ill treated, or sometimes when it has been so violent, that all the relief given, has only prevented it from being deadly, without being able to attain a compleat cure.

We rank under two heads, the disorders which an ill cured acute distemper leaves after it. These disorders become the cause of lingering diseases, or are the source of corruption in the general mass of the humours, or an inherent defect of some particular organ. I shall not enter into an enumeration of the different disorders contained under these two general heads; I shall only speak of the three which are the most frequent, warning every body again of the great importance, to be careful of acute diseases in their beginnings, to apply the proper remedies and not to give them over till a compleat cure.

§ 598. If a patient who recovers from an acute disease, does not get again his appetite, sleep, or strength, if he finds himself sickly, uneasy, he is certain that the distemper has been cured imperfectly, and he ought without delay to apply to a person capable of distinguishing his distress, and of rectifying it, that he may prevent thereby the bad consequences whilst it is yet perhaps time: But unhappily people neglect these first seeds of the most cruel diseases, or what is yet more dismal, they treat them without reflection and method, by repeated acrid purgatives,

or by other violent remedies which weaken the patient, and strengthen the cause of the malady; or by heating stomachics, which, far from producing the desired effect, encrease the fever and loathing.

§ 599. Frequent shiverings, especially in the evening, a small cough, great sweating in the night-time, a rapid waste of the body, flushing of heat chiefly after meals, a pulse always frequent; all these things may make us presume that the blood is infected with pus, and it is a frequent consequence of inflammatory diseases. If there is a *vomica* in the lungs, it will be discovered by the symptoms described in § 67, and 68.

§ 600. Another [consequence of acute diseases, and above all of putrid ones, is a considerable alteration of the bile, which acquires, during the fever, a principle of corruption that it cannot lose; an insurmountable loathing at food, but especially animal food, a continual uneasiness, a disagreeable sensation in the neighbourhood of the stomach, a complexion almost always a little yellow, a total want of sleep, very irregular stools, often a foetid diarrhea, are symptoms, which ordinarily accompany people in that state.

§ 601. If an ill cured fever leaves a hardness in any part; a dull pain or rather a sensation of weight in that part, joined to the signs which shew that its functions are not so well performed as usual, and to that inexpressible feeling which we experience when we are not well, without having however as much fever, uneasiness, and loathing as in the two former maladies, § 599 and 600, denote the symptoms whereby they are known.

§ 602. When there is reason to believe that there is pus in the blood, or that the bile is corrupted, the patient ought to live on vegetables, such as different kinds of roots, farinaceous substances, herbs and fruits. He ought to drink nothing but water, or whey, or water acidulated with lemon-juice or spirit of vitriol. Violent motion, or motion continued too long, are hurtful in these two cases, by increasing the fever, and thereby hastening the corruption of the humours.

§ 603. Although the hardness of some viscous, § 601, is less troublesome than these two other distempers, and though we see every day persons that are attacked by them, and who live very long without being affected by them but very slightly; it happens likewise often that after a
confi-

considerable progress, not only the functions of the attacked organ are entirely disordered, but those of adjacent parts are disordered also by the irritation and compression which they suffer; and from thence results a great number of chronic diseases, the most cruel and incurable: this is one of the most frequent causes of dropsies. The cure of these tumours require great attention from the doctor, and great patience, and constancy from the patient, when he is taking the remedies. The regimen ought to consist of vegetables, above all herbs, fruits very ripe, and a little tender meat. The patient ought to be very sparing in the use of acids, properly called so, taken alone, or in large doses; whey, as in No. 17, pills in No. 18, and those in No. 57; many kinds of mineral waters, the juice of lactescent plants are very proper, and have often produced very good effects.

§ 604. This hardness of the *viscera*, this principle of *pus* in the blood, and this corruption of the bile, are often formed without being preceded by an acute disease. They are easily known by the symptoms, which I have already pointed out.

§ 605. The nervous disorders form more than the half of lingering diseases; those who labour under them, may find some directions to moderate the symptoms, and retard the progress; § 500, 501, 502, 503, 516, 517.

§ 606. Those who have a difficulty of breathing, who cannot walk without being oppressed, cough sometimes, have frequent palpitations, without being subject to nervous disorders, who cannot sleep, when their head is low, or in a close bed, or in a room somewhat warm, or when they awake with much uneasiness after their first sleep; those I say who have all, or any of these symptoms, have some ailment in their breast which may bring on very fatal and cruel distempers. But as symptoms very similar in appearance may depend on many causes very different, and very opposite, the only general advices that I can give, are 1st, That it is of greater importance in these diseases than in the most part of others, to give remedies to them early. 2d, That it is more dangerous in this case than in any other, to venture remedies, violent or improper. 3d, That it is of the greatest moment to observe the most exact regimen, and to restrict the patient to eat the smallest quantity of the plainest food; he ought to drink nothing

but

but water, seldom or never sup, and to shun equally inactivity and too violent exercise.

§ 607. I shall say no more in this chapter, but shall end it by repeating, (in a work of this nature, repetitions are necessary) that the greatest distempers begin by the slightest disorders; sometimes by a stroke or a fall, which has not been attended to, see § 442, 443; that likewise when any disorder whatever, lodged in the inward parts, is felt again and again; that when any function is often disordered; that when any evacuation is not properly performed, immediate care ought to be taken to rectify these things. Remedies taken without a proper guide, and without method, are very often fatal; they generally do much harm, and never any good, but by mere chance, on which it would be foolish to rely. In short, a very great sobriety, a great moderation in exerting the faculties of our mind, and a moderate active life, are the only remedies adapted to all lingering diseases.

C H A P. XXXV.

Of Mountebanks, Quacks, and Conjurers.

SECT. 608.

ONE dreadful scourge still remains to be treated of, which occasions a greater mortality than all the distempers I have hitherto described; and which, as long as it continues, will defeat our utmost precautions to preserve the healths and lives of the common people. This, or rather these scourges, for they are very numerous, are quacks, of which there are two species: The mountebanks or travelling quacks, and those pretended physicians in villages and country-places, both male and female, known in *Switzerland* by the name of conjurers, and who very effectually unpeople it.

The first of these, the mountebanks, without visiting the sick, or thinking of their distempers, sell different medicines, some of which are for external use, and these often do little or no mischief; but their internal ones are much oftner pernicious. I have been a witness of their dreadful effects, and we are not visited by one of these wandering caitsiffs, whose admission into our country is not mortally fatal to some of its inhabitants. They are inju-
rious

rious also in another respect, as they carry off great sums of money with them, and levy annually some thousands of livres, amongst that order of the people who have the least to spare. I have seen, and with a very painful concern, the poor labourer and the artisan, who have scarcely possessed the common necessities of life, borrow wherewithal to purchase, and at a dear price, the poison that was to compleat their misery, by increasing their maladies, and which, where they escaped with their lives, has left them in such a languid and inactive state, as has reduced their whole family to beggary.

§ 609. An ignorant, knavish, lying, and impudent fellow, will always seduce the gross and credulous mass of people, incapable to judge of and estimate any thing rightly, and adapted to be the eternal dupes of such, as are base enough to endeavour to dazzle their weak understandings; by which method these vile quacks will certainly defraud them, as long as they are tolerated. But ought not the magistrates, the guardians, the protectors, the political fathers of the people interpose, and defend them from this danger, by severely prohibiting the entrance of such pernicious fellows into a country, where mens lives are very estimable, and where money is scarce, since they extinguish the first, and carry off the last, without the least possibility of their being in any-wise useful to it? Can such forcible motives as these suffer our magistrates to delay *their* expulsion any longer, *whom* there never was the least reason for admitting?

§ 610. It is acknowledged the conjurors, the residing conjurors, do not carry out the current money of the country, like the itinerant quacks; but the havock they make among their fellow-subjects is without intermission, whence it must be very great, as every day in the year is marked with many of their victims. Without the least knowledge or experience, and offensively armed with three or four medicines, whose nature they are as thoroughly ignorant of, as of their unhappy patients diseases; and which medicines, being almost all violent ones, are very certainly so many swords in the hands of raging madmen. Thus armed and qualified, I say, they aggravate the slightest disorders, and make those that are a little more considerable mortal; but from which the patients would have recovered, if left solely to the conduct of nature; and for a still stronger reason, if they had confided to the guidance of her experienced observers and assistants.

§ 611. The robber who assassinates on the highway, leaves the traveller the resource of defending himself, and the chance of being aided by the arrival of other travellers; but the poisoner, who forces himself into the confidence of a sick person, is a hundred times more dangerous, and as just an object of punishment.

The bands of highwaymen and their individuals, that enter into any country or district, are described as particularly as possible to the public. It were equally to be wished, we had also a list of these physical impostors and ignorants, male and female, and that a most exact description of them, with their number, and a brief summary of their murderous exploits, were faithfully published. By this means the populace might probably be inspired with such a wholesome dread of them, that they would no longer expose their lives to the mercy of such executioners.

§ 612. But their blindness, with respect to these two sorts of maleficent beings, is inconceivable. That indeed in favour of the mountebank is somewhat less gross, because, as they are not personally acquainted with him, they may the more easily credit him with some part of the talents and the knowledge he arrogates. I shall therefore inform them, and it cannot be repeated too often, that whatever ostentatious dress and figure some of these impostors make, they are constantly vile wretches, who, incapable of earning a livelihood in any honest way, have laid the foundation of their subsistence on their own amazing stock of impudence, and that of the weak credulity of the people; that they have no scientific knowledge; that their titles and patents are so many impositions, and inauthentic; since by a shameful abuse, such patents and titles are become articles of commerce, which are to be obtained at very low prices; just like the second-hand laced cloaks which they purchase at the brokers; that their certificates of cures are so many chimeras or forgeries; and that, in short, if among the prodigious multitudes of people who take their medicines, some of them should recover, which it is almost physically impossible must not sometimes be the case, yet it would not be the less certain that they are a pernicious destructive set of men. A thrust of a rapier into the breast has saved a man's life, by seasonably opening an imposthume in it, which might otherwise have killed him; and yet internal penetrating wounds, with a small sword, are not the less mortal for one such extraordinary

dinary consequence. Nor is it even surprising that these mountebanks, which is equally applicable to conjurers, who kill thousands of people, whom nature alone, or assisted by a physician, would have saved, should now and then cure a patient, who had been treated before by the ablest physicians. Frequently patients of that class, who apply to these mountebanks and conjurers (whether it has been, that they would not submit to the treatment proper for their distempers, or whether the real physician, tired of the intractable creatures, has discontinued his advice and attendance) look out for such doctors as assure them of a speedy cure, and venture to give them such medicines as kill many, and cure one (who has had constitution enough to overcome them) a little sooner than a justly reputable physician would have done. It is but too easy to procure, in every parish, such lists of their patients, and of their feats, as would clearly evince the truth of whatever has been said here relating to them.

§ 613. The credit of this market, this fair-hunting doctor, surrounded by five or six hundred peasants, staring and gaping at him, and counting themselves happy in his condescending to cheat them of their very scarce and necessary cash, by selling them, for twenty times more than its real worth, a medicine whose best quality were to be only a useless one; the credit, I say, of this vile yet tolerated cheat would quickly vanish, could each of his auditors be persuaded of what is strictly true, that except a little more tenderness and agility of hand, he knows full as much as his doctor, and that, if he could assume as much impudence, he would immediately have as much ability, would equally deserve the same reputation, and to have the same confidence reposed in him.

§ 614. Were the populace capable of reasoning, it were easy to disabuse them in these respects; but, as it is, their guardians and conductors should reason for them. I have already proved the absurdity of reposing any confidence in mountebanks, properly so called; and that reliance some have on the conjurers is still more stupid and ridiculous.

The very meanest trade requires some instruction: A man does not commence even a cobbler, a botcher of old leather, without serving an apprenticeship to it; and yet no time has been served, no instruction has been attended to by these pretenders to the most necessary, useful, and elegant

elegant profession. We do not confide the mending, the cleaning a watch, to any who have not spent several years in considering how a watch is made, what are the requisites and causes of its going right, and the defects or impediments that make it go wrong; and yet the preserving and rectifying the movements of the most complex, the most delicate and exquisite, and the most estimable machine upon earth, is entrusted to people who have not the least notion of its structure, of the causes of its motions, nor of the instruments proper to rectify their deviations.

Let a soldier, discarded from his regiment for his roguish tricks, or who is a deserter from it, a bankrupt, a disreputable ecclesiastic, a drunken barber, or multitudes of such other worthless people, advertise that they mount, set, and fit up all kinds of jewels and trinkets in perfection; if any of these are not known, if no person in the place has ever seen any of their work, or if they cannot produce authentic testimonials of their honesty and their ability in their business, not a single individual will trust them with two penny worth of false stones to work upon; in short, they must be famished. But if, instead of professing themselves jewellers, they post themselves up as physicians, the crowd purchase, at a high rate, the pleasure of trusting them with the care of their lives, the remaining part of which they rarely fail to empoison.

§ 615. The most genuine and excellent physicians, these extraordinary men, who, born with the happiest talents, began to form their understandings from their earliest youth, who have afterwards carefully qualified themselves by cultivating every branch of physic, who have sacrificed the best and most pleasurable days of their lives to an irregular and assiduous investigation of the human body, of its various functions, of the causes that may impair or embarrass them, and informed themselves of the qualities and virtues of every simple and compound medicine, who have surmounted the difficulty and loathsomeness of living in hospitals, among thousands of patients, and who had added the medical observations of all ages and places to their own; these few and extraordinary men, I say, still consider themselves as short of that perfect ability and consummate knowledge, which they contemplate and wish for, as necessary to guarding the precious *depositum* of human life and health, confided to their charge. Nevertheless we see the same inestimable treasures

tures, intrusted to gross and stupid men, born without talents, brought up without education or culture, who frequently can scarcely read, who are as profoundly ignorant of every subject that has any relation to physic as the savages of *Asia*, who awake only to drink away, who often exercise their horrid trade merely to find themselves in strong liquor, and execute it chiefly when they are drunk, who, in short, became physicians only from their incapacity to arrive at any trade or attainment! Certainly such a conduct, in creatures of the human species, must appear very astonishing, and even melancholy, to every sensible thinking man, and constitute the highest degree of absurdity and extravagance.

Should any person, duly qualified, enter into an examination of the medicines they use, and compare them with the situation and symptoms of the patients to whom they give them, he must be struck with horror, and heartily deplore the fate of that unfortunate part of the human race, whose lives, so important to the community, are committed to the charge of the most murderous set of beings.

§ 616. Some of these caitiffs, however, apprehending the force and danger of that objection, founded on their want of study and education, have endeavoured to elude it, by infusing and spreading a false, and indeed an impudent impious prejudice among the people, which prevails too much at present, and this is, that their talents for physic are a supernatural gift, and, of course, greatly superior to all human knowledge. It were going out of my province to expatiate on the indecency, the sin, and the irreligion of such knavery, and incroaching upon the rights and perhaps the duty of the clergy; but I intreat the liberty of observing to this respectable order of men, that this superstition, which is attended with dreadful consequences, seems to call for their utmost attention: And in general the expulsion of superstition is the more to be wished, as a mind imbued with false prejudices, is less adapted to imbibe a true and valuable doctrine. There are some very callous hardened villains among this murdering band, who, with a view to establish their influence and revenue, as well upon fear as upon hope, have horridly ventured so far as to incline the populace to doubt, whether they receive their boasted gift and power
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from heaven or from hell ! and yet these are the men who are intrusted with the health and lives of many others.

§ 617. One fact which I have already mentioned, and which it seems impossible to account for, is, that great earnestness of the peasant to procure the best assistance he can for his sick cattle. At whatever distance the farrier lives, or some person who is supposed qualified to be one (for unfortunately there is not one in *Switzerland*) if he has considerable reputation in this way, the country-man goes to consult him, or purchases his visit at any price. However expensive the medicines are, which the horse-doctor directs, if they are accounted the best, he procures them for his poor beast. But if himself, his wife or children fall sick, he either calls in no assistance nor medicines; or contents himself with such as are next at hand, however pernicious they may be, though nothing the cheaper on that account: For certainly the money, extorted by some of these physical conjurers from their patients, but oftner from their heirs, is a very shameful injustice, and calls loudly for reformation.

§ 618. In an excellent memoir or tract, which will shortly be published, on the population of *Switzerland*, we shall find an important and very affecting remark, which strictly demonstrates the havock made by these im-medical magicians or conjurers; and which is this: That in the common course of years, the proportion between the numbers and deaths of the inhabitants of any one place, is not extremely different in city and country: But when the very same epidemical disease attacks the city and the villages, the difference is enormous; and the number of deaths of the former, compared with that of the inhabitants of the villages, where the conjurer exercises his bloody dominion, is infinitely more than the deaths in the city.

I find in the second volume of the *Memoirs of the œconomical society of Berne*, for the year 1762, another fact equally interesting, which is related by one of the most intelligent and sagacious observers concerned in that work. "Pleurifies and peripneumonies (he says) prevailed at *Cottens a la Cote*; and some peasants died under them, who had consulted the conjurers, and taken their heating medicines; while of those, who pursued a directly opposite method, almost every one recovered."

§ 619. But I shall employ myself no longer on this
Vol. II. B b topic,

topic, on which the love of my species alone has prompted me to say this much ; though it deserves to be considered more in detail, and is, in reality, of the greatest consequence. None methinks could make themselves easy with respect to it so much as physicians, if they were conducted only by lucrative views ; since these conjurers diminish the number of those poor people, who sometimes consult the real physicians, and with some care and trouble, but without the least profit, to those gentlemen. But what good physician is mean and vile enough to purchase a few hours of ease and tranquillity at so high, so very odious a price ?

§ 620. Having thus clearly shewn the evils attending this crying nuisance, I wish I were able to prescribe an effectual remedy against it, which I acknowledge is far from being easy to do.

The first necessary point probably was to have demonstrated the great and public danger, and to dispose the state to employ their attention on this fatal, this mortal abuse ; which, joined to the other causes of depopulation, has a manifest tendency to render *Switzerland* a desert.

§ 621. The second, and doubtless the most effectual means, which I had already mentioned is, not to admit any travelling mountebank to enter this country ; and to set a mark on all conjurers : it may probably also be found convenient to inflict corporal punishment on them ; as it has been already adjudged in different countries by sovereign edicts. At the very least they should be marked with public infamy, according to the following custom practised in a great city in France. “ When any mountebanks appeared in Montpellier, the magistrates had a power to mount each of them upon a meagre miserable ass, with his head to the ass’s tail. In this condition they were led throughout the whole city, attended with the shouts and hooting of the children and the mob, beating them, throwing filth and ordure at them, and dragging them all about.”

§ 622. A third conducive means would be the instructions and admonition of the clergy on this subject, to the peasants in their several parishes. For this conduct of the common people amounting, in effect, to suicide, to self-murder, it must be important to convince them of it. But the little efficacy of the strongest and repeated exhortations on so many other articles, may cause us to entertain a
very

very reasonable doubt of their success on this. Custom seems to have determined, that there is nothing in our day, which excludes a person from the title and appellation of an honest and honourable man, except it be mere and convicted theft; and that for this simple and obvious reason, that we attach ourselves more strongly to our property than to any thing else. Even homicide is esteemed and reputed honourable in many cases. Can we reasonably then expect to convince the multitude, that it is criminal to confide the care of their health to these poisoners, in hopes of a cure of their disorders? A much likelier method of succeeding on this point would certainly be, to convince the deluded people, that it will cost them less to be honestly and judiciously treated, than to suffer under the hands of these executioners. The expectation of a good and cheap health market will be apt to influence them more, than their dread of a crime would.

§ 623. A fourth means of removing or restraining this nuisance would be to expunge, from the almanacks, all the astrological rules relating to physic; as they continually conduce to preserve and increase some dangerous prejudices and notions in a science, the smallest errors in which are sometimes fatal. I had already reflected on the multitude of peasants that have been lost, from postponing, or mistiming a bleeding, only because the sovereign decision of an almanack had directed it at some other time. May it not also be dreaded, to mention it by the way, that the same cause, the almanacks, may prove injurious to their rural oeconomy and management; and that by advising with the moon, who has no influence, and is of no consequence in vegetation or other country business, they may be wanting in due attention to such other circumstances and regulations, as are of real importance in them?

§ 624. A fifth concurring remedy against this popular evil would be the establishment of hospitals, for the reception of poor patients, in the different cities and towns of *Switzerland*.

There may be a great many easy and concurring means of erecting and endowing such, with very little new expence; and immense advantages might result from them: Besides, however considerable the expences might prove, is not the object of them of the most interesting, the most important nature? It is incontestibly our serious duty; and it would soon be manifest, that the performance of it

would be attended with more essential intrinsic benefit to the community, than any other application of money could produce. We must either admit, that the multitude, the body of the people is useless to the state, or agree, that care should be taken to preserve and continue them. A very respectable Englishman, who, after a previous and thorough consideration of this subject, had applied himself very assiduously and usefully on the means of increasing the riches and the happiness of his countrymen, complains that in England, the very country in which there are the most hospitals, the poor who are sick are not sufficiently assisted. What a deplorable deficiency of the necessary assistance for such must then be in a country, that is not provided with a single hospital? That aid from surgery and physic, which abounds in cities, is not sufficiently diffused into country-places: And the peasants are liable to some simple and moderate diseases, which, for want of proper care, degenerate into a state of infirmity, that sinks them into premature death.

§ 625. In fine, if it be found impossible to extinguish these abuses, (for those arising from quacks are not the only ones, nor is that title applied to as many as really deserve it) beyond all doubt it would be for the benefit and safety of the public, upon the whole, entirely to prohibit the art, the practice of physic itself. When real and good physicians cannot effect as much good, as ignorant ones and impostors can do mischief, some real advantage must accrue to the state, and to the whole species, from employing none of either. I affirm it, after much reflection, and from thorough conviction, that anarchy in medicine is the most dangerous anarchy. For this profession, when loosed from every restraint, and subjected to no regulations, no laws, is the more cruel scourge and affliction, from the incessant exercise of it; and should its anarchy, its disorders, prove irremediable, the practice of an art become so very noxious, should be prohibited under the severest penalties: Or, if the constitution of any government was inconsistent with the application of so violent a remedy, they should order public prayers against the mortality of it, to be offered up in all the churches; as the custom has been in other great and general calamities.

§ 626. Another abuse, less fatal indeed than those already mentioned, (but which, however, has real ill consequences, and at the best, carries out a great deal of money

ney from us, though less at the expence of the common people than of those of easy circumstances) is that blindness and facility, with which many suffer themselves to be imposed upon, by the pompous advertisements of some *Catholican*, some universal remedy, which they purchase at a high rate, from some foreign pretender to a mighty secret or *nostrum*. Persons of a class or two above the populace do not care to run after a mountebank, from supposing they should depreciate themselves by mixing with the herd. Yet if that very quack, instead of coming among us, were to reside in some foreign city; if, instead of posting up his lying puffs and pretensions at the corners of the streets, he would get them inserted in the gazettes, and news-papers; if instead of selling his boasted remedies in person, he should establish shops or offices for that purpose in every city; and finally, if instead of selling them twenty times above their real value, he would still double that price; instead of having the common people for his customers, he would take in the wealthy citizen, persons of all ranks, and from almost every country. For strange as it seems, it is certain, that a person of such a condition, who is sensible in every other respect, and who will scruple to confide his health to the conduct of such physicians as would be the justest subjects of his confidence, will venture to take, through a very unaccountable insatiation, the most dangerous medicine, upon the credit of an imposing advertisement, published by as worthless and ignorant a fellow as the mountebank whom he despises, because the latter blows a horn under his window; and yet who differs from the former in no other respects except those I have just pointed out.

§ 627. Scarcely a year passes, without one or another such advertised and vaunted medicine's getting into high credit; the ravages of which are more or less, in proportion to its being more or less in vogue. Fortunately for the human species, but few of these *nostrums* have attained an equal reputation with Allhaud's Powders, an inhabitant of Aix in Provence, and unworthy the name of a physician, who has over-run Europe for some years with a violent purge, the remembrance of which will not be effaced before the extinction of all its victims. I attend now, and for a long time past, several patients, whose disorders I palliate without hopes of ever curing them; and who owe their present melancholy state of body to

nothing but the manifest consequences of these powders ; and I have actually seen, very lately, two persons who have been cruelly poisoned by this boasted remedy of his. A French physician, as eminent for his talents and his science, as estimable from his personal character in other respects, has published some of the unhappy and tragical consequences which the use of them has occasioned ; and were a collection published of the same events from them, in every place where they have been introduced, the size and the contents of the volume would make a very terrible one.

§ 628. It is some comfort, however, that all the other medicines thus puffed and vended have not been altogether so fashionable, nor yet quite so dangerous : But all posted and advertised medicines should be judged of upon this principle (and I do not know a more infallible one in physics, nor in the practice of physic) that whoever advertises any medicine, as an universal remedy for all diseases, is an absolute impostor, such a remedy being impossible and contradictory. I shall not here offer to detail such proofs as may be given of the verity of this proposition : But I freely appeal for it to every sensible man, who will reflect a little on the different causes of diseases ; on the opposition of these causes ; and on the absurdity of attempting to oppose such various diseases, and their causes, by one and the same remedy.

As many as shall settle their judgments properly on this principle, will never be imposed upon by the superficial gloss of these sophisms contrived to prove, that all diseases proceed from one cause ; and that this cause is so very tractable, as to yield to one boasted remedy. They will perceive at once, that such an assertion must be founded in the utmost knavery or ignorance ; and they will readily discover where the fallacy lies. Can any one expect to cure a dropsy, which arises from too great a laxity of the fibres, and too great an attenuation or thinness of the blood, by the same medicines that are used to cure an inflammatory disease, in which the fibres are too stiff and tense, and the blood too thick and dense ? Yet consult the news papers and the posts ; and you will see published, in and on all of them, virtues just as contradictory ; and certainly the authors of such poisonous contradictions ought to be legally punished for them.

§ 629. I heartily wish the public would attend here to a
very

very natural and obvious reflection. I have treated in this book but of a small number of diseases, most of them acute ones : and I am positive, that no competent well qualified physician has ever employed fewer medicines, in the treatment of the diseases themselves. Nevertheless I have prescribed seventy-one, and I do not see which of them I could retrench, or dispense with the want of, if I were obliged to use one less. Can it be supposed then, that any one single medicine, compound or simple, shall cure thirty times as many diseases as those I have treated of ?

§ 630. I shall add another very important observation, which doubtless may have occurred to many of my readers ; and it is this, that the different causes of diseases, their different characters ; the differences which arise from the necessary alterations that happen throughout their progress and duration ; the complications of which they are susceptible ; the varieties which result from the state of different epidemics, of seasons, of sexes, and of many other circumstances ; that these diversities, I say, oblige us very often to vary and change the medicines ; which proves how very ticklish and dangerous it is to have them directed by persons, who have such an imperfect knowledge of them, as those who are not physicians must be supposed to have. And the circumspection to be used in such cases ought to be proportioned to the interest the assistant takes in the preservation of the patient ; and that love of his neighbour with which he is animated.

§ 631. Must not the same arguments and reflections unavoidably suggest the necessity of an entire tractability on the part of the patient, and his friends and assistants ? The history of diseases which have their stated times of beginning, of manifesting and displaying themselves, of arriving at, and continuing in their height, and of decreasing ; do not all these demonstrate the necessity of continuing the same medicines, as long as the character of the distemper is the same, and the danger of changing them often, only because what has been given has not afforded immediate relief ? Nothing can injure the patient more than this instability and caprice. After the indication which his distemper suggests, appears to be well deduced, the medicine must be chosen that is likeliest to resist the cause of it ; and it must be continued as long as no new symptom or circumstance supervenes, which requires an

alteration of it, except it should be evident, that an error has been incurred in giving it. But to conclude that a medicine is useless or insignificant, because it does not remove or abate the distemper as speedily as the impatience of the sick would naturally desire it, and to change it for another, is as unreasonable, as it would be for a man to break his watch, because the hand takes twelve hours to make a revolution round the dial-plate.

§ 632. Physicians have some regard to the state of the urine of sick persons, especially in inflammatory fevers: as the alterations occurring in it help them to judge of the changes, that may have been made in the character and consistence of the humours in the mass of blood; and thence may conduce to determine the time in which it will be proper to dispose them to some evacuation. But it is gross ignorance to imagine, and utter knavery and imposture to persuade the sick; that the mere inspection of their urine solely, sufficiently enables others to judge of the symptoms and cause of the disease, and to direct the best remedies for it. This inspection of the urine can only be of use when it is duly inspected, when we consider at the same time the exact state and the very looks of the patient; when these are compared with the degree of the symptoms of the malady, with the other evacuations, and when the physician is strictly informed of all external circumstances, which may be considered as foreign to the malady, which may alter or affect the evacuations, such as particular articles of food, particular drinks, different medicines, or the very quantity of drink. Where a person is not furnished with an exact account of these circumstances, the mere inspection of the urine is of no service, it suggests no indication, nor any expedient; and mere common sense sufficiently proves, and it may be boldly affirmed, that whoever orders any medicine, without any other knowledge of the disease, than what an inspection of the urine affords, is a rank knave, and the patient who takes them is a dupe.

§ 633. And here now any reader may very naturally ask, whence can such a ridiculous credulity proceed, upon a subject so essentially interesting to us as our own health?

In answer to this it should be observed, that some sources, some causes of it seem appropriated merely to the people, the multitude. The first of these is, the mechanical impression

impression of parade and shew upon the senses. 2. The prejudice they have conceived, as I said before, of the conjurers curing by a supernatural gift. 3. The notion the country people entertain, that their distemper and disorders are of a character and species peculiar to themselves, and that the physicians, attending the rich, know nothing concerning them. 4. The general mistake that their employing the conjurer is much cheaper. 5. Perhaps a sheepish shame-faced timidity may be one motive, at least with some of them. 6. A kind of fear too, that physicians will consider their cases with less care and concern, and be likely to treat them more cavalierly; a fear which increases that confidence which the peasant, and which indeed every man has in his equal, being founded in equality itself. And, 7. The discourse and conversation of such illiterate empirics being more to their taste, and more adapted to their apprehension.

But it is less easy to account for this blind confidence, which persons of a superior class (whose education being considered as much better, are regarded as better reasoners) repose in these boasted remedies, and even for some conjurer in vogue. Nevertheless even some of their motives may be probably assigned.

The first is that great principle of *feity*, or *selfness*, as it may be called, innate to man, which attaching him to the prolongation of his own existence, more than to any other thing in the universe, keeps his eyes, his utmost attention, continually fixed upon this object: and compels him to make it the very point, the purpose of all his advances and proceedings; notwithstanding it does not permit him to distinguish the safest paths to it from the dangerous ones. This is the surest and shortest way, says some collector at the turnpike; he pays, passes, and perishes from the precipices that occur in his route.

This very principle is the source of another error, which consists in reposing, involuntarily, a greater degree of confidence in those, who flatter and fall in the most with us in our favourite opinions. The well-apprised physician, who foresees the length and the danger of a disease, and who is a man of too much integrity to affirm what he does not think, must, from a necessary construction of the human frame and mind, be listened to less favourably, than he who flatters us by saying what we wish. We endeavour

vour to elongate, to absent ourselves from the sentiments, the judgment of the first ; we smile, from self-complacency, at those of the last, which in a very little time are sure of obtaining our preference.

A third cause, which results from the same principle, is, that we give ourselves up the most readily to his conduct, whose method seems the least disagreeable, and flatters our inclinations the most. The physician who enjoins a strict regimen, who insists upon some restraints and self-denials, who intimates the necessity of time and patience for the accomplishment of the cure, and who expects a thorough regularity through the course of it, disgusts a patient who has been accustomed to indulge his own taste and humour ; the quack, who never hesitates at complying with it, charms him. The idea of a long and somewhat distant cure, to be obtained at the end of an unpleasant and unrelaxing regimen, supposes a very perilous disease ; this idea disposes the patient to disgust and melancholy ; he cannot submit to it without pain ; and he embraces, almost unconsciously, merely to avoid this, an opposite system which presents him only with the idea of such a distemper as will give way to a few doses of simples.

That propensity to the new and marvellous, which tyrannizes over so large a proportion of our species, and which has advanced so many absurd persons and things into reputation, is a fourth and a very powerful motive. An irksome satiety, and a tiresomeness, as it were, from the same objects, is what our nature is apt to be very apprehensive of ; though we are incessantly conducted towards it, by a perception of some void, some emptiness in ourselves, and even in society too : But new and extraordinary sensations rousing us from this disagreeable state, more effectually than any thing else, we unthinkingly abandon ourselves to them, without foreseeing their consequences.

A fifth cause arises from seven eighths of mankind being managed by, or following the other eighth ; and, generally speaking, the eighth that is so very forward to manage them, are the least fit and worthy to do it ; whence all must go amiss, and absurd and embarrassing consequences ensue from the condition of society. A man of excellent sense frequently sees only through the eyes of
a fool,

a fool, of an intriguing fellow, or of a cheat; in this he judges wrong, and his conduct must be so too. A man of real merit cannot connect himself with those who are addicted to caballing; and yet such are the persons who frequently conduct others.

Some other causes might be annexed to these, but I shall mention only one of them, which I have already hinted, and the truth of which I am confirmed in from several years experience; which is, that we generally love those who reason more absurdly than ourselves, better than those who convince us of our own weak reasoning.

I hope the reflections every reader will make on these causes of our ill conduct on this important head, may contribute to correct or diminish it; and to destroy those prejudices whose fatal effects we may continually observe.

C H A P. XXXVI.

Questions absolutely necessary to be answered exactly by the Patient who consults a Physician.

S E C T. 634.

GREAT consideration and experience are necessary to form a right judgment of the state of a patient, whom the physician has not personally seen; even though he should receive the best information it is possible to give him, at a distance from the patient. But this difficulty is greatly augmented, or rather changed into an impossibility, when his information is not exact and sufficient. It has frequently happened to myself, that after having examined peasants who came to get advice for others, I did not venture to prescribe, because they were not able to give me a sufficient information, in order to my being certain

tain of the distemper. To prevent this great inconvenience, I subjoin a list of such questions, as indispensably require clear and direct answers.

General Questions.

What is the patient's age?

Is he generally a healthy person?

What is his general course of life?

How long has he been sick?

In what manner did his present sickness begin, or appear?

Has he any fever?

Is his pulse hard or soft?

Has he still tolerable strength, or is he weak?

Does he keep his bed in the day-time, or quit it?

Is he in the same condition throughout the whole day?

Is he still, or restless?

Is he hot or cold?

Has he pains in the head, the throat, the breast, the stomach, the belly, the loins, or in the limbs, the extremities of the body?

Is his tongue dry? does he complain of thirst? of an ill taste in his mouth? of reachings to vomit, or of an aversion to food?

Does he go to stool often or seldom?

What appearance have his stools, and what is their usual quantity?

Does he make much urine? What appearance has his urine, as to colour and contents? Are they generally much alike, or do they change often?

Does he sweat?

Does he expectorate, or cough up?

Does he get sleep?

Does he draw his breath easily?

What regimen does he observe in his sickness?

What medicines has he taken?

What effects have they produced?

Has he never had the same distemper before?

§ 635. The diseases of women and children are attended with peculiar circumstances; so that when advice is asked for them, answers must be given, not only to the preceding questions, which relate to sick persons in general, but also to the following, which regard these particularly.

Questions with regard to Women.

Have they arrived at their monthly discharges, and are these regular?

Are they pregnant? If so, how long since?

Are they in child-bed?

Has their delivery been happily accomplished?

Has the mother cleansed sufficiently?

Has her milk come in due time and quantity?

Does she suckle the infant herself?

Is she subject to the whites?

Questions relating to Children.

What is the child's exact age?

How many teeth has he cut?

Does he cut them painfully?

Is he any-wise ricketty, or subject to knots or kernels?

Has he had the small-pox?

Does the child void worms, upwards or downwards?

Is his belly large, swelled, or hard?

Is his sleep quiet, or otherwise?

§ 636. Besides these general questions, common in all the diseases of the different sexes and ages, the person consulting must also answer to those, which have a close and direct relation to the disease, at that very time affecting the sick.

For example, in the quinsy, the condition of the throat must be exactly inquired into. In diseases of the breast, an account must be given of the patient's pains, of his cough, of the oppression, and of his breathing, and expectoration. I shall not enter upon a more particular

lar detail ; common sense will sufficiently extend this plan or specimen to other diseases ; and though these questions may seem numerous, it will always be easy to write down their answers in as little room as the questions take up here. It were even to be wished that persons of every rank, who occasionally write for medical advice and directions, would observe such a plan or succession, in the body of their letters. By this means they would frequently procure the most satisfactory answers, and save themselves the trouble of writing second letters, to give a necessary explanation of the first.

The success of remedies depends, in a very great measure, on a very exact knowledge of the disease, and that knowledge on the precise information of it, which is laid before the physician.

T A B L E

Of the Prescriptions and Medicines, referred to in the foregoing Treatise; which, with the Notes beneath them, are to be read before the taking, or application, of any of the said Medicines.

AS in order to ascertain the doses of medicines, I have generally done it by pounds, ounces, half ounces, &c. and as this method, especially to the common people, might prove a little too obscure and embarrassing, I have specified here the exact weight of water, contained in such vessels or liquid measures, as are most commonly used in the country.

The pound which I mean, throughout all these prescriptions, is that consisting of sixteen ounces. These ounces contain eight drachms, each drachm consisting of three scruples, and each scruple of twenty grains; the medical scruple of Paris solely containing twenty-four grains.

The liquid measure, the pot used at Berne, being that I always speak of, may be estimated, without any material error, to contain three pounds and a quarter, which is equal to three pints and eight common spoonfuls English measure. But the exact weight of the water, contained in the pot of Berne, being fifty-one ounces and a quarter only, it is strictly equal but to three pints and six common spoonfuls English. This however is a difference of no importance, in the usual drinks or aliments of the sick.

The small drinking glass we talk of, filled so as not to run over, contains three ounces and three quarters. But
filled,

filled, as we propose it should for the sick, it is to be estimated only at three ounces.

The common middle-sized cup, though rather large than little, contains three ounces and a quarter. But as dealt out to the sick, it should not be estimated, at the utmost, above three ounces.

The small glass contains 7 common spoonfuls; so that a spoonful is supposed to contain half an ounce.

The small spoon, or coffee-spoon, when of its usual size and cavity, may contain thirty drops, or a few more; but, in the exhibition of medicines, it may be reckoned at thirty drops. Five or six of these are deemed equal in measure, to a common soup-spoon.

The basin or porringer, mentioned in the present treatise, holds, without running over, the quantity of five glasses, which is equivalent to eighteen ounces and three quarters. It may be estimated however, within a fraction, at eighteen ounces: And a sick person should never be allowed to take more than a third part of this quantity of nourishment, at any one time.

The doses in all the following prescriptions are adjusted to the age of an adult or grown man, from the age of eighteen to that of sixty years. From the age of twelve to eighteen, two thirds of that dose will generally be sufficient: And from twelve down to seven years one half, diminishing this still lower, in proportion to the greater youth of the patient: So that not more than one eighth of the dose prescribed should be given to an infant of some months old, or under one year. But it must also be considered, that their different constitutions will make a considerable difference in adjusting their different doses. It were to be wished, on this account, that every person would carefully observe whether a strong dose is necessary to purge him, or if a small one is sufficient; as exactness is most important in adjusting the doses of such medicines as are intended to purge, or to evacuate in any other manner.

No. 1.

Take a pugil or large pinch between the thumb and fingers of elder-flowers; put them into an earthen-ware mug or porringer, with two ounces of honey, and an ounce and an half of good vinegar. Pour upon them three pints and one quarter of boiling water. Stir it about a little with a spoon to mix and dissolve the honey; then
cover

cover up the mug ; and, when the liquor is cold, strain it through a linen cloth.

No. 2.

Take two ounces of whole barley, cleanse and wash it well in hot water, throwing away this water afterwards. Then boil it in five chopins or English pints of water, till the barley bursts and opens. Towards the end of the boiling, throw in one drachm and a half of nitre [salt-petre], strain it through a linen-cloth, and then add to it one ounce and a half of honey, and one ounce of vinegar *.

No. 3.

Take the same quantity of barley as before, and instead of nitre, boil in it, as soon as the barley is put in to boil, a quarter of an ounce of cream of tartar. Strain it, and add nothing else † to it.

No. 4.

Take three ounces of the freshest sweet almonds, and one ounce of gourd or melon seeds ; bruise them in a mortar, adding to them, by a little at a time, one pint of water, then strain it through linen. Bruise what remains again, adding gradually to it another pint of water, then straining, and adding water to the residue, till full three pints at least of water are thus used : After which it may again be poured upon the bruised mass, stirred well about, and then be finally strained off. Half an ounce of sugar may safely be bruised with the almonds and seeds at first, though some weakly imagine it too heating ; and delicate persons may be allowed a little orange-flower water with it.

* This makes an agreeable drink ; and the notion of its being windy is idle ; since it is so only to those, with whom barley does not agree. It may, where barley is not procurable, be made from oats.

† In those cases mentioned § 241, 262, 280, instead of the barley, four ounces of grass roots may be boiled in the same quantity of water for half an hour, with the cream of tartar.

No. 5.

Take two pugils of mallow leaves and flowers, cut them small, and pour a pint of boiling water upon them. After standing some time strain it, adding one ounce of honey to it. For want of mallows, which is preferable, a similar glyster may be made of the leaves of mercury, pellitory of the wall, the marsh-mallows, the greater mallows, from lettuce, or from spinage. A few very particular constitutions are not to be purged by any glyster but warm water alone; such should receive no other, and the water should not be very hot.

No. 6.

Boil a pugil of mallow flowers, in a pint of barley water for a glyster.

No. 7.

Take three pints of simple barley-water, add to it three ounces of the juice of sow-thistle, or of groundsel, or of the greater houseleek, or of borage *.

No. 8.

To one ounce of oxymel of squills, add five ounces of a strong infusion of elder-flowers.

No. 9.

There are many different emollient applications, which have very nearly the same virtues: The following are the most efficacious.

1. Flannels wrung out of a hot decoction of mallow-flowers.

2. Small bags filled with mallow-flowers, or with those of mullein, of elder, of camomile, or wild corn-poppy, and boiled either in milk or water.

* These juices are to be procured from the herbs when fresh and very young, if possible, by beating them in a marble mortar, or for want of such [or a wooden mortar] in an iron one, and then squeezing out the juice through a linen bag. It must be left to settle a little in an earthen vessel, after which the clear juice must be decanted gently off, and the sediment be left behind.

3. Poultices

3. Poultices of the same flowers boiled in milk and water.

4. Bladders half filled with hot milk and water, or with some emolient decoction.

5. A poultice of boiled bread and milk, or of barley or rice boiled till thoroughly soft and tender.

6. In the pleurisy, (see § 89), the affected part may be rubbed sometimes with ointment of marsh-mallows.

No. 10.

To one ounce of spirit of sulphur, add six ounces of syrup of violets, or, for want of the latter, as much barley-water, of a thicker consistence than ordinary *.

No. 11.

Take two ounces of manna, and half an ounce of Sedlitz salt, or for want of it, as much Epsom salt; dissolving them in four ounces of hot water, and straining them.

No. 12.

Take of elder-flowers one pugil, of hyssop leaves half as much: Pour three pints of boiling water upon them. After infusing some time, strain and dissolve three ounces of honey in the infusion.

* Some friends, says Dr. TISSOT, whose judgment I greatly respect, have thought the doses of acid spirits which I direct extremely strong, and doubtless they are so, if compared with the doses generally prescribed, and to which I should have limited myself, if I had not frequently seen their insufficiency. Experience has taught me to increase them considerably; and, augmenting the dose gradually, I now venture to give larger doses of them than have ever been done before, and always with much success; the same doses which I have advised in this work not being so large as those I frequently prescribe. For this reason I intreat those physicians, who have thought them excessive, to try the acid spirits in larger doses than those commonly ordered; and I am persuaded they will see reason to congratulate themselves upon the effect †.

† Dr. FULLER assures us, a gentleman's coachman was recovered from the bleeding small-pox, by large and repeated doses of the oil of vitriol, in considerable draughts of cold water.

No. 13.

Is only the same kind of drink made by omitting the hyssop, and adding instead of it as much more elder-flowers.

No. 14.

Let one ounce of the best Jesuits bark in fine powder be divided into sixteen equal portions.

No. 15.

Take of the flowers of St. John's wort, of elder, and of meliot, of each a few pinches; put them into the bottom of an ewer or vessel containing five or six English pints, with half an ounce of oil of turpentine, and fill it with boiling water.

No. 16.

Is only the syrup of the flowers of the wild red corn-poppy.

No. 17.

Is only very clear sweet whey, in every pint of which one ounce of honey is to be dissolved.

No. 18.

Take of castile or hard white soap six drachms; of extract of dandelion one drachm and a half; of gum-ammoniacum half a drachm, and with syrup of maiden-hair make a mass of pills, to be formed into pills, weighing three grains each.

No. 19.

Gargarisms may be prepared from a decoction, or rather an infusion, of the leaves of periwinkle, or of red rose-leaves, or of mallows. Two ounces of vinegar and as much honey must be added to every pint of it, and the patient should gargle with it pretty hot. The deterging, cleansing gargarism referred to § 112, is a light infusion of the tops of sage, adding two ounces of honey to each pint of it.

No. 20.

No. 20.

Is only one ounce of powdered nitre, divided into sixteen equal doses.

No. 21.

Take of jalop, of fenna, and of cream of tartar, of each thirty grains finely powdered, and let them be very well mixed.

No. 22.

Take of China-root, and of sarsaparilla, of each one ounce and a half, of sassafras root, and of the shavings of guaiacum, otherwise called *lignum vitæ*, of each one ounce. Let the whole be cut very fine. Then put them into a glazed earthen vessel, pouring upon them about five pints of boiling water. Let them boil gently for an hour; then take it from the fire, and strain it off through linen. This is called the Decoction of the Woods, and is often of different proportions of these ingredients, or with the addition of a few others. More water may, after the first boiling, be poured on the same ingredients, and be boiled up into a small decoction for common drink.

No. 23.

Take one ounce of the pulp of tamarinds, half a drachm of nitre, and four ounces of water; let them boil not more than one minute, then add two ounces of manna, and when dissolved strain the mixture off.

No. 24.

Is only an ounce of cream of tartar, divided into eight equal parts.

No. 25.

This prescription is only the preparation of Kermes mineral, otherwise called the Chartrusian powder. DR. TISSOT orders but one grain for a dose. It has been directed from one to three.

No. 26.

Take three ounces of the common burdock-root, boil it for half an hour, with half a drachm of nitre, in three full pints of water.

No. 27.

Take half a pinch of the herbs prescribed No. 9. Article 2, and half an ounce of hard white soap shaved thin. Pour on these one pint and a half of boiling water, and one glass of wine. Strain the liquor, and squeeze it strongly out.

No. 28.

Take of the purest quick silver one ounce; of Venice-turpentine half a drachm, of the freshest hog's lard two ounces, and let the whole be very well rubbed together into an ointment.

No. 29.

This prescription is nothing but the yellow basilicon.

No. 30.

Take of natural and factitious, or artificial cinnabar, twenty-four grains each; of musk sixteen grains, and let the whole be reduced into fine powder, and very well mixed*.

No. 31.

* This medicine was brought over from the East-Indies by Sir George Cob, and published under the name of the Tonquin Medicine. Its reputation was very considerable, and some success was even observed from its use in Europe. Dr. Nugent, Physician in Bath, has published a case wherein its good effects were pretty manifest; and Dr. Whytt, in his late Treatise on Nervous Disorders, has given us a similar instance of the good effects of this medicine. It is to be observed, however, that in both these cases opium was given along with it; and in the latter, a plaster of gelbanum and opium was applied to the throat. What advantages these may have in composition I know not. Cinnabar in a separate state we certainly know to be inert, and we can hardly imagine that it renders the medicine any ways more active. The other two ingredients, musk and opium, have been given separately in a greater dose than in either of the cases above-mentioned, without effect.

Indeed we have had many remedies offered for this disease, but most of them in their turn have been proved ineffectual. It is no wonder that ignorant people may have been deceived at a time when their fears are greatly alarmed, and have interpreted appearances into madness that really indicated no such thing. But it is surprising that physicians, no ways deficient in learning or candour, should have suffered themselves to

No. 31.

Take one drachm of Virginia snake-root in powder ;
of camphor and of assa-foetida ten grains each ; of opium
one

to have been so palpably imposed upon, or so confidently believed the histories of cures performed in these imaginary cases of madness. None ought to be relied on, where the animal inflicting the wound, either by effects occurring in himself, or following the wounds made by him on other animals, did not previously discover the symptoms of madness. Nay they will always be suspicious where the patient himself does not discover some symptom of being affected. And, I believe, there are few remedies which have yet been offered to the public, that are not liable to exceptions from the above-mentioned fallacy.

After this remark, it would be unjust not to mention the great probability there is of effecting a cure by the use of mercury. The analogy drawn from the effects of this mineral in the venereal disease, would certainly lead to its exhibition; and accordingly in many trials it has been found of service. In Vol. I. of *Nova Acta Academiæ Cæsariensis*, &c. there is given by Dr. Kubn the history of a woman who was cured of the bite of a mad dog by applying a plaster composed of digestive ointment, theriaca and red precipitate, to the wound, and taking four grains of Turbith mineral for three days successively. The woman gave no signs of madness herself; but ten cows, bit by the same dog, died thereof. But this practice was more early begun, and more satisfactorily supported, by an ingenious gentleman (Darlue) in the third and fourth volumes of the *Recueil Periodique d' Observations de Medicin de Chirurgie et de Pharmacie*, who relates many cases of patients cured by mercurial unction and Turbith pills: and these too at a period remote from the time of receiving the bite. Among other cases, the worthy Author relates his own. Wherever these medicines were exhibited before any symptoms of the madness came on, the patients were always cured, excepting one single instance; and even after the madness actually appeared, some obtained a complete cure; while others indeed, from the great progress of the disorder, died. And in Vol. V. the use of these remedies is confirmed by Choisel, a Jesuit, who affirms that they both prevent and cure the madness. The circumstances necessary in the exhibition of these medicines are their early and constant application. In some of the cases, indeed, a cure was obtained, where the medicines were applied late, but then with less certainty. In others too it was not necessary

one grain, and with a sufficient quantity of conserve, or rob of elder, make a bolus*.

No. 32.

Take three ounces of tamarinds. Pour on them one pint of boiling water, and after letting them boil a minute or two, strain the liquor through a linen-cloth.

No. 33.

Take seven grains of Turbith mineral; and make it into a pill or bolus with a little crumb of bread †.

No. 34.

This is nothing but a prescription of six grains of tartar emetic ‡.

sary to continue the use of them, till a salivation was produced. But then this circumstance seems favourable to the cure, both from reason and experience.—From reason, as the matter producing the disorder seems spontaneously to take this course—And from experience, in so far as this circumstance seemed in most of the cases to be useful.

It may not perhaps be amiss further to observe, that as we are yet uncertain, whether mercury acts chiefly in this and other disorders, by destroying or by evacuating the poison taken in, it will be best to exhibit it in that form which is likeliest to do both. External unction, to whatever part applied, we know will produce all the effects that mercury internally taken will; at least so far as regards its evacuating powers. But if there be any thing in the notion of its destroying qualities, these will be applied to greatest advantage to that very part by which the poison was introduced. So that if we are to chuse either one or the other of these methods, external unction to the part affected seems to be the most useful.

* When this is preferred to No. 30, of which musk is an ingredient, the grain of opium should be omitted, except once, or at most twice in the twenty-four hours. Two doses of quicksilver, of fifteen grains each, should be given daily in the morning, in the interval between the other boluses.

† This medicine makes the dogs vomit and flaver abundantly. It has effected many cures after the *hydrophobia*, the dread of water, was manifest. It must be given three days successively, and afterwards twice a week for fifteen days.

‡ When people are ignorant of the strength of the tartar emetic, (which is often various,) or of the patient's being easy or difficult to vomit, a dose and a half may be dissolved in a quart of warm water, of which he may take a glass every quarter of an hour, whence the operation may be forwarded, or otherwise regulated, according to the number of vomits, or stools. This method, much used in Paris, seems a safe and eligible one.

No. 35.

No. 35.

Take thirty five grains of ipecacuana, which, in the very strongest constitutions, may be augmented to forty-five, or even to fifty grains.

No. 36.

Prescribes only the common blistering plaster ; and the note observes, that very young infants who have delicate skins may have sinapisms applied instead of blisters ; and made of a little old leaven, kneaded up with a few drops of sharp vinegar.

No. 37.

Take of the tops of *chamædrys* or ground oak, of the lesser centaury, of wormwood and of camomile, of each one pugil. Pour on them three pints of boiling water, and suffering them to infuse until it is cold, strain the liquor through a linen-cloth, pressing it out strongly.

No. 38.

Take forty grains of rhubarb, and as much cream of tartar in powder, mixing them well together.

No. 39.

Take three drachms of cream of tartar, and one drachm of ipecacuana fine powdered. Rub them well together, and divide them into six equal parts.

No. 40.

Take of the simple mixture one ounce, of spirit of vitriol half an ounce, and mix them. The dose is one or two tea spoonfuls in a cup of the patient's common drink. The simple mixture is composed of five ounces of treacle-water camphorated, of three ounces of spirit of tartar rectified, and one ounce of spirit of vitriol. If the patient has an insuperable aversion to the camphor, it must be omitted, though the medicine is less efficacious without it. And if his thirst is not very considerable, the simple mixture may be given alone, without any further addition of spirit of vitriol.

No. 41.

Take half a drachm of Virginia snake-root, ten grains of camphor, and make them into a bolus with rob of elder-berries. If the patient's stomach cannot bear so large a dose of camphor, he may take it in smaller doses and oftner,

ofiner, viz. three grains, every two hours. If there is a violent looseness, diascordium must be substituted instead of the rob of elder-berries.

No. 42.

Prescribes only the *theriaca pauperum*, or poor man's treacle, in the dose of a quarter of an ounce. The following composition of it is that chiefly preferred by our author. Take equal parts of round birthwort-roots, of elecampane, of myrrh, and of rob or conserve of juniper-berries, and make them into an electuary of a rather thin than very stiff consistence, with syrup of orange-peel.

No. 43.

The first of the three medicines referred to in this number, is that already directed No. 37. The second is as follows :

Take equal parts of the lesser centaury, of wormwood, of myrrh, all powdered, and of conserve of juniper-berries, making them up into a pretty thick consistence with syrup of wormwood. The dose is a quarter of an ounce ; to be taken at the same intervals as the bark.

For the third composition—Take of the roots of calamus aromaticus and elecampane well bruised, two ounces ; of the tops of the lesser centaury cut small, a pugil ; of filings of unrudded iron, two ounces ; of old white wine, three pints. Put them all into a wide-necked bottle, and set it upon embers, or on a stove, or by the chimney, that it may be always kept hot. Let them infuse twenty-four hours, shaking them well five or six times ; then let the infusion settle, and strain it. The dose is a common cup every four hours four times daily, and timing it one hour before dinner.

No. 44.

Take a quarter of an ounce of cream of tartar, a pugil of common camomile ; boil them in twelve ounces of water for half an hour, and strain it off.

No. 45.

Directs only the common sal-ammoniac, from two scruples to one drachm for a dose. The note to it adds, that it may be made into a bolus with rob of elder ; and observes, that those feverish patients, who have a weak delicate stomach, do not well admit of this salt, no more than of several others, which affect them with great disorder and anxiety.

No. 46

No. 46.

The powder. Take one pugil of camomile-flowers, and as much elder-flowers, bruising them well; of fine flower or starch three ounces; of ceruse and of blue smalt each, half an ounce: Rub the whole and mix them well. This powder may be applied immediately to the part.

The plaster. Take of the ointment called *nutritum*, made with the newest sweet oil, two ounces; of white wax three quarters of an ounce, and one quarter of an ounce of blue smalt. Melt the wax, then add the *nutritum* to it, after the smalt finely powdered has been exactly incorporated with it; stirring it about with an iron spatula or rod, till the whole is well mixed and cold. This is to be smoothly spread on linen-cloth.

A quarter of an ounce of smalt may also be mixed exactly with two ounces of butter or ointment of lead, to be used occasionally instead of the plaster.

No. 47.

Take one ounce of Sedlitz, or for want of that, as much Epsom salt and two ounces of tamarinds: Pour upon them eight ounces of boiling water, stirring them about to dissolve the tamarinds. Strain it off, and divide it into two equal draughts, to be given at the interval of half an hour between the first and last.

No. 48.

Take of Sydenham's liquid laudanum eighty drops; of balm water two ounces and a half. If the first or second dose stops, or considerably lessens the vomiting, this medicine should not be repeated.

No. 49.

Dissolve three ounces of manna, and twenty grains of nitre, in twenty ounces, or six glasses of sweet whey.

No. 50.

To two ounces of syrup of diacodium, or white-poppy heads, add an equal weight of elder-flower water, or for want of it, of spring water.

No. 51.

Directs nothing but a drachm of rhubarb in powder.

No. 52.

No. 52.

Take of *fulphur vivum*, or of flower of brimstone, one ounce ; of sal-ammoniac one drachm ; of fresh hog's lard, two ounces ; and mix the whole very well in a mortar.

No. 53.

Take two drachms of crude antimony and as much nitre, both finely powdered and very well mixed, dividing the whole into eight equal doses.

No. 54.

* Take of filings of iron, not the least rusty, and of sugar, each one ounce ; of anniseeds powdered, half an ounce. After rubbing them very well together, divide the powder into twenty-four equal portions ; one of which is to be taken three times a-day an hour before eating.

No. 55.

Take of filings of sound iron two ounces ; of leaves of rue, and of white hoarhound one pugil each ; of black hellebore-root, one quarter of an ounce, and infuse the whole in three pints of wine in the manner already directed, No. 43. The dose of this is one small cup three times a-day, an hour before eating †.

No. 56.

Take two ounces of filings of iron ; of rue leaves and anniseeds powdered, each half an ounce. Add to them

* The prescriptions No. 54, 55, 56, are calculated against distempers which arise from obstructions, and a stoppage of the monthly discharges ; which No. 55 is more particularly intended to remove ; those of 54 and 56 are most convenient, either when the suppression does not exist, or is not to be much regarded, if it does. This medicine may be rendered less unpalatable for persons in easy circumstances, by adding as much cinnamon instead of anniseeds ; and though the quantity of iron be small, it may be sufficient, if given early in the complaint ; one, or, at the most, two of these doses daily, being sufficient for a very young maiden.

† I chuse to repeat here, the more strongly to inculcate so important a point, that in women who have long been ill and languid, our endeavours must be directed towards the restoring of the patient's health and strength, and not to forcing down the monthly discharges, which is a very pernicious practice. These will return of course, if the patient is of a proper age, as she grows better.

a sufficient

a sufficient quantity of honey to make an electuary of a good consistence. The dose is a quarter of an ounce three times daily.

No. 57.

Take of the extract of the stinking hemlock, with the purple spotted stalk, one ounce. Form it into pills weighing two grains each ; adding as much of the powder of dry hemlock leaves, as the pills will easily take up. Begin the use of this medicine by giving one pill night and morning. Some patients have been so familiarized to it, as take at length half an ounce daily *.

No. 58.

Take of the roots of grass and of succory well washed, each one ounce. Boil them a quarter of an hour in a pint of water. Then dissolve in it half an ounce of Sedlitz, or of Epsom salt, and two ounces of manna ; and strain it off to drink one glass of it from half hour to half hour, till its effects are sufficient. It is to be repeated at the interval of two or three days.

No. 59.

Is a cataplasm or poultice made of crumb of bread, with camomile-flowers boiled in milk, and the addition of some soap, so that each poultice may contain half a quarter of an ounce of this last ingredient. And when the circumstances of female patients have not afforded them that regular attendance, which the repetition of the poultice requires, as it should be renewed every three hours, I have successfully directed the hemlock plaster of the shops.

No. 60.

Take a sufficient quantity of dry hemlock-leaves. Secure them properly between two pieces of thin linen-cloth, so as to make a very flexible sort of small matras, letting it boil a few moments in water, then squeeze it out and apply it to the affected part. It must thus be moistened and heated a-fresh, and re-applied every two hours.

No. 61.

Take of the eyes of the craw-fish, or of the true white magnesia, two drachms ; of cinnamon powdered four

* Our learned and candid author has a very long note in this place, strongly in favour of Storck's extract of hemlock, in which it is evident he credits the greater part of the cures affirmed by Dr. Storck to have been effected by it.

grains. Rub them very well together, and divide the whole into eight doses. One of these is to be given in a spoonful of milk, or of water, before the infant sucks.

No. 62.

Take of an extract of walnuts, made in water, two drachms; and dissolve it in half an ounce of cinnamon-water. Fifty drops a day of this solution is to be given to a child of two years old; and after the whole has been taken, the child should be purged. This extract is to be made of the unripe nuts, when they are of a proper growth and consistence for pickling.

No. 63.

Take of resin of jalap two grains. Rub it a considerable time with twelve or fifteen grains of sugar, and afterwards with three or four sweet almonds; adding, very gradually, two common spoonfuls of water. Then strain it through clear thin linen, as the emulsion of almonds was ordered to be. Lastly, add a tea-spoonful of syrup of capillaire to it. This is no disagreeable draught, and may be given to a child of two years old; and if they are older, a grain or two more of the resin may be allowed. But under two years old, it is prudent to purge children rather with syrup of succory, or with manna.

No. 64.

Take of the ointment called *Nutritum* one ounce; the entire yolk of one small egg, or the half of a large one, and mix them well together. This *Nutritum* may be readily made by rubbing very well together, and for some time, two drachms of ceruse [white lead] half an ounce of vinegar, and three ounces of common oil.

No. 65.

Melt four ounces of white wax; add to it, if made in winter, two spoonfuls of oil; if in summer none at all, or at most, not above a spoonful. Dip in this slips of linen-cloth not worn too thin, and let them dry: Or spread it thin and evenly over them.

No. 66.

Take of oil of roses one pound; of red lead half a pound; of vinegar four ounces. Boil them together nearly to the consistence of a plaster; then dissolve in the liquid

liquid mass an ounce and a half of yellow wax, and two drachms of camphire, stirring the whole about well. Remove it then from the fire, and spread it on sheets or slips of paper, of what size you think most convenient. The ointment of *Chambauderie*, so famous in many families on the continent, is made of a quarter of a pound of yellow wax, of the plaster of three ingredients (very nearly the same with No. 66) of compound of diachylon and of common oil, of each the same quantity, all melted together, and then stirred about well, after it is removed from the fire, till it grows cold. To make a sparadrap, or oil cloth, which is linen, covered with or dipped in an emplastick substance or ointment, it must be melted over again with the addition of a little oil, and applied to the linen as directed No. 65.

No. 67.

Gather in autumn, while the fine weather lasts, the agaric of the oak, which is a kind of *fungus* or excrescence, issuing from the wood of that tree.

It consists at first of four parts, which present themselves successively; 1. The outward rind or skin, which may be thrown away. 2. That part immediately under this rind, which is the best of all. It is to be beat well with a hammer, till it becomes soft and very pliable. This is the only preparation it requires, and a slice of it of a proper size is to be applied directly over the bursting of open blood-vessels. It constringes and brings them close together, stops the bleedings, and generally falls off at the end of two days. 3. The third part, adhering to the second, may serve to stop the bleeding from the smaller vessels; and the fourth and last part may be reduced to powder, as conducing to the same purpose.

No. 68.

Take four ounces of crumbs of bread, a pugil of elder-flowers, and the same quantity of those of camomile, and of St. John's wort. Boil them into a poultice in equal quantities of vinegar and water.

If fomentations should be thought preferable, take the same herbs, or some pugils of the ingredients for *salfrank*: Throw them into a pint and a half of boiling water, and let them infuse some minutes. Then a pint of vinegar is to be added, and flannels or other woollen cloths dipped in

in the fomentation, and wrung out, are to be applied to the part affected.

For the aromatic fomentations, recommended § 449, take leaves of betony and of rue, flowers of rosemary or lavender, and red roses, of each a pugil and a half. Boil them for a quarter of an hour in a pot with a cover with three pints of old white wine. Then strain it off, squeezing the liquor strongly from the herbs, and apply it as already directed.

No. 69.

Directs only the plaster of diapalma *.

No. 70.

Directs only a mixture of two parts water, and one part of vinegar of litharge.

No. 71.

Take of the leaves of sow-bread, and of camomile tops, of each one pugil. Put them into an earthen vessel with half an ounce of soap, and as much sal-ammoniac, and pour upon them three pints of boiling water.

* To spread that upon lint, as directed § 466, it must be melted down again with a little oil.

F I N I S.